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From the Library of the
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Harvard University

THE

MUSEUMS JOURNAL

THE ORGAN OF THE MUSEUMS ASSOCIATION.

EDITED BY

E. HOWARTH, F.R.A.S., F.Z.S.,

Museum & Art Gallery, Sheffield.

*

ASSISTED BY

W. E. HOYLE, M.A., and F. A. BATHER, M.A., D.SC., in ENGLAND;
A. B. MEYER, M.D., GERMANY; F. A. LUCAS, UNITED STATES;
BERNARD H. WOODWARD, F.G.S., AUSTRALIA;
W. L. SCLATER, M.A., F.Z.S., SOUTH AFRICA;
AND
CAPT. F. W. HUTTON, F.R.S, NEW ZEALAND.

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Museums Association:

Annual Report of the Council submitted at the Bradford Conference, 1902.

ONE of the greatest difficulties experienced in working this Association arises, as might be expected, from the extent of the area over which its members are scattered. The annual meeting, by bringing together museum curators from various quarters, helps largely to remedy this isolation. But the interval of a year between the meetings is a long one, when nothing is done to bridge it over. More frequent meetings are out of the question; as it is, attendance at the annual meetings often involves much personal inconvenience on the part of individual curators attending. It was largely with the purpose of diminishing this difficulty that the Association in 1899 resolved to appoint an Executive committee. The special function assigned to this committee was that of assisting the secretaries to deal with matters arising between the annual meetings. But its unwritten commission was to preserve the continuity of the Association's history from annual meeting to annual meeting. More fully to carry out this purpose, it was decided last year that the Executive committee should report at each annual meeting upon the progress of the Association since the last conference.

The report now to be submitted is of the most encouraging nature. At the beginning of the period under review, the Association took a step long contemplated and often urged—that of issuing a monthly journal instead of an annual report. Before making this venture the council issued an appeal to the museums constituting the Association, asking that as many as possible would increase their yearly subscription from one guinea to two. Sixteen museums responded—Blackburn, Bootle, Brighton, Canterbury, Dundee, Glasgow, the Horniman Museum, Maidstone, Nottingham, the Parkes Museum, the Museum of the Pharmaceutical Society, Salford, Sheffield Public Museum, the Ruskin Museum (Sheffield), Worcester, and York. To this list should be added Sunderland, which has paid an annual subscription of two guineas since the foundation of the Association.

The *Museums Journal* has been issued monthly, and has been offered for sale at 10/6 per annum, post free, or 12/- nett for a bound volûme at the end of the year. Each museum and associate in the Association has received one copy, and those paying two guineas have received two copies. The result has been in every way gratifying. In spite of the additional expense entailed by the publication of a journal (as compared with that of an annual report), the treasurer's statement shews that our financial position, which in past years has always been good, has decidedly improved. One noteworthy feature in our balance-sheet is the large increase in the amount obtained by the sale of past reports.

Our growth since the last meeting has been marked. Owing to Mr. Peek's death, the Peek Museum has withdrawn from the Association; two associates have also resigned. But against this we have to set the accession of five museums and twenty-three associates—all of whom are connected with museums. We have also obtained thirty-one outside subscribers to the Journal.

The Executive committee has met twice since the Edinburgh meeting. Its most important task has been the arrangement of the present meeting. Last year it was decided that the 1902 meeting should be held in Cardiff. But the museum authorities of that city pointed out that their museum could not be ready at the time proposed for the conference, and asked that the visit of the Association might be put off till their arrangements were nearer completion. The committee, therefore, accepted the kind invitation of the Bradford Museum Committee, and, in accordance with the powers given by the last general meeting, elected Mr. W. E. B. Priestley as president, and Mr. W. C. Lupton (the Mayor of Bradford), Alderman J. S. Toothill, Messrs. J. E. Fawcett, J. A. Godwin, J. Monckman, E. Naylor, T. Pawson, W. West, and J. E. Wilson vice-presidents.

Some correspondence has been carried on with the Board of Education on the subject of the insurance and care of loan collections, and the conditions have been modified in favour of local museums. Insurance against theft in transit is not now required when an official accompanies the collection, and the Board no longer insists on the employment of a night patrol in cases where the collection contains no objects of special value.

The Executive committee has also decided to publish the forthcoming Directory of Museums in the Journal in monthly instalments, eight pages in each number of the Journal to be devoted to this subject. On the completion of the Directory, it will be possible to detach these monthly parts and to bind them together. It is expected that the first instalment will appear in the August issue of the Journal.

Museums Association.

BRADFORD CONFERENCE, 1902.

ADDRESS BY THE PRESIDENT. W. E. B. PRIESTLEY, J.P.

FOR many reasons I am glad you have decided to hold your Annual Conference this year at Bradford, but especially because of the fact that now is being erected in our city an art gallery and museum, and through your assistance and advice it is thought that we shall be enabled to make it one of the most perfect institutions in the country.

The city, through the generosity of one of its most foremost citizens, is making a great step forward, which is a most necessary step, judging by the progress of the world, and one which should mean something which at the present moment the majority of our citizens are not able to appreciate, or understand, but one which the future generations will look back to, and say that it was not only wise but that it was for the benefit of the city as a whole, and they will fully appreciate the generosity of the donor.

You gentlemen who are here, and who know so much about the necessary working of art galleries and museums, and the advantages to be derived from them, can, and I trust will, advise us as to what will make our institution one of the foremost in the country. We are desirous of starting with the experience that many have gained, and we can only trust that if we improve upon what has gone before, it will encourage the cities, in which you live, to make their institutions more perfect than they are at present.

It is only during the last two or three decades that it has been thought necessary, in large commercial cities, that art galleries and museums should be established for the prosperity and happiness of the people, and this is only because of what many of our citizens have seen and recognised when travelling through the world, and have seriously felt that all must be done that is possible to raise and elevate the great masses of

people, not only that they should be able commercially to compete with other nations, but that they should also be able to appreciate everything that is most elevating in life, and through that add to their material happiness.

In large commercial cities there are many reasons why there should be a central art gallery and museum; some few of these reasons I wish to put before you, and at the same time I shall try to show you what is being done in other great industrial centres.

(1) The building itself should be of such a character that it is not only an ornament to the city, but an incentive from an architectural point of view for great and beautiful work.

(2) The contents of the building should be of such a practical character as to help the inhabitants of the city in their commerce, which is their living.

(3) The contents should inspire the people with new ideas, they should help the people to see the possibilities of the future through the examples of the past, and thereby be an incentive for future prosperity.

(4) The contents should give to the community happiness and pleasure through seeing the beautiful creations of man.

First—With respect to the building itself. How often does one hear the remark: "It is a beautiful city!" and how often when one goes to other cities the buildings are pointed out, and one is asked to judge the city by such buildings. In the past in our large industrial cities, many have thought that it has not been necessary to have beautiful buildings, they were purely commercial, and if everything was substantial and plain all requirements would be met; but even in the most modern countries, especially America, those ideas are now put upon one side, and in many of the large practical towns there has been established a committee of taste, and no public, or large private buildings, are allowed to be erected without the plans being submitted to such committee. They fully recognise what would be to the advantage of the city as a whole from an artistic point of view.

One of the most modern cities on the continent of Europe is Vienna, and it has been laid out, and all its public buildings

erected, with the idea that it should be as perfect as possible, and appeal not only to the artistic taste of the citizens themselves, but also to the foreigners who visit it. That is the idea that ought to be followed by all large cities of Great Britain, and I am glad to think that our new art gallery will, from an artistic point of view, always be an example as to what should be done in order to make the city beautiful.

After one has travelled, how many times one is asked the question, "Which was the most beautiful city you saw ?" Realising that one's own people do ask this question, I wish to impress upon my own citizens how much it is their duty to encourage the erection of all buildings in such a manner that they will make the city attractive, and how much they ought to appreciate a citizen like Lord Masham.

The second point I mentioned was that the contents of the building should be of such a practical character as to help the trade of the city. It is no use filling our galleries and museums with exhibits which do not interest the people, and which do not, in the slightest degree, help them in their ordinary daily life. One very noticeable feature in many American and European cities is the really practical use they make of their public institutions, and I do not think I can do better than tell you of what I have seen recently on the Continent of Europe, from the point of view I now mention.

In Cologne there is an industrial museum with exhibits of ancient and modern furniture, which shew what wood carving has been from very early periods.

In Leipzig, which is noted for its book and printing trade, there is an institution which is used for the exhibition of anything connected with the printing trade, and whilst I was there, there was being arranged an exhibition of colour printing and book binding from the very earliest periods, in order to encourage the people of their city interested in the trade. Such exhibitions must have a beneficial effect upon the city as a whole.

There is also at Leipzig a wonderful ethnological museum, founded by a Leipzig citizen, with the idea that he thought it wise to let his own people know how the world had at various

periods, in different countries, progressed and had been built up, and how man had lived, and that they could benefit through what he could show them of that life of the past.

At Nuremberg, a town not nearly so large as our own, there is one institution which is entirely devoted to exhibits of everything connected with railways. There are models of the first engines made, some sixty to seventy years ago, and also of those most recently built. There are also models of every appliance used upon railways at the present time.

Besides this exhibition there is another large building entirely devoted to all branches of industry, and examples are there of the most beautiful productions of all nations, whether it is furniture, or pottery, or lace work, and hundreds of other different things, and at the same time a part of the building is used as an exhibition of the most modern things made in order to show their citizens what is being created at the present moment.

In Stuttgart there is a most wonderful pile of buildings which is used for the exhibition of all modern inventions in every branch of trade, and there a student may go and see models of the latest inventions in the engineering world, while at the same time he may see the latest style in furniture, or examples of tapestry or any other industry. Whilst I was there, an exhibition was being held of all the work that had been done during the last year in the public schools, and this is a good and encouraging way of using our local museums.

Whilst I was in Frankfort I was at the opening of the annual exhibition of their various local industries, and I noticed experts from many countries who were desirous of knowing what the progress was.

In one of their museums may be found the latest productions in furniture, pottery, jewellery, works of art, and any industry through which the citizens of Frankfort live.

I only mention these few centres to show to what use an art gallery and museum, in our large commercial centres, can be turned, and how it can be made to help the various branches of our own trade in a very practical way.

The third thing that I wish to refer to is, that the contents should inspire the people with new ideas, that they should learn, through the examples of the past, what the possibilities of the future are. It is an old saying that "there is nothing new under the sun," it is only the adaptation of old principles to modern ideas that creates anything new. This is fully recognized by the younger countries, they know full well they can only learn by the past, but if they take full advantage of what has gone before, and apply it to what is required to-day they move forward very rapidly. The fear in our own country is that we are liable to feel that what was good enough in the past is sufficient for to-day, and to rely entirely upon our perseverance and doggedness, which may be a sign of stupidity.

In every large industrial centre in America, or on the Continent, one finds educational institutions with most wonderful examples of every past invention in every walk of industry.

In Dresden, Munich, Vienna, Buda Pesth, and all large German towns, one finds departments, connected with either the art galleries and museums or the technical institutions, which are looked upon almost as research departments. There are the models of great past inventions; also the ideas of men who have thought of great things, which have not been completed in their own time. These things are collected and tabulated, and put before the people in these public institutions, with one idea, that the young people of the cities may look at them, and that they will be inspired, and through such inspiration will probably create something which, without the assistance of these examples, they would never have thought of.

That leads me to say that I hold that all are born with a gift, but it depends upon the environment as to whether that gift is developed. How easy it is to leave the thousands of children in our city without example or encouragement, and then to wonder that the city is not prosperous; and yet we all know how impressionable and receptive a child is. If you only put a proper incentive before it, it is just as easy to make it strong and great as it is to leave it to drift to useless things.

There is another point, with respect to the contents of an art gallery and museum, to which I must refer, and with which I was most greatly impressed in every gallery in Europe that I have visited. This has nothing to do with what some would term the purely practical side of life, but it has a great deal to do with the elevating of the people on the artistic side.

In Berlin, Dresden, Leipzig, Buda Pesth, Munich, Stuttgart, and all large cities I visited, there are, besides the industrial institutions that I have mentioned, art and sculpture galleries, and in all I find there is one idea, or system, being carried out; everything is being done so that the student shall easily grasp and appreciate the whole progress of art from the very earliest periods. One example I will mention with respect to sculpture, and it will suffice for the rest—that is the sculpture gallery, at Dresden; there, one finds plaster models of all the greatest creations from the Egyptian period. All are so arranged in different rooms that the student may see the gradual development that has taken place through many centuries, and through what he sees he is inspired to do his utmost. He sees before him the achievements of the past, and realises that art, like everything else, is only step by step, and all that one can expect to do is to make one step forward, and then he has done his work.

The way that these modern countries put before the student the greatness of the past is the sound way to encourage the man of ambition to make the one step forward.

As in Dresden, so in Berlin, Stuttgart, Cologne, Frankfort, Buda Pesth, and Brussels it is the same, and I would strongly recommend all those who are interested in art museums and picture galleries to follow these examples. It is far better to have perfect reproductions of great works of art, than it is to fill our galleries with modern creations of an inferior kind.

As in sculpture, so it is in painting. Wherever I went I found, if the galleries did not contain the greatest works of art, they possessed most perfect reproductions, which showed to the student the technique and excellence of the master almost as perfectly as if he had seen the original picture.

I advocate galleries and art museums being established on the lines that I have suggested, not only because of the

advantage to be gained by the student, but also that it opens up the continual life of centuries to the ordinary passer-by. He sees things so tabulated and arranged that he begins to consider what was the life of these various countries and cities at the period when these great creators of art lived; it takes him out of his own everyday life, and makes him consider things in a very much larger way; and it must not be forgotten that you can influence in a much easier way through the faculty of sight than you can through any other faculty.

The last point which I wish to make with respect to art galleries and museums and their contents, is that they give to the community great happiness and pleasure through seeing the most beautiful creations of man. We have in our city, and the same holds good in all other large cities, the young child that goes very early in life to the mill, or the workshop, to earn money; we have the young girl, and young man, of seventeen or eighteen, who spend all their working day and give all their energy to the making of a living; we have the mother, who also works; and we have the father, who spends the best time of his life in earning money to keep the home. Such people are the great majority of a large city, and in fact you may say that they are the people of the city; and yet there is no life for them but this life of making money so that they can live. Undoubtedly there should be. They have no opportunity of seeing the world and appreciating its great beauties, and knowing what happiness is to be got through nature; therefore it is the duty of all governors of cities to see that the most beautiful reproductions of nature, and that the greatest creations of the most enlightened men, be brought as close to them as possible, knowing that the power of realising happiness through beauty and excellence is given to all, no matter how humble the life may be; and it is that happiness that makes the hard, matter-of-fact life, that so many millions live, worth living. What we have got to do is to elevate people above their ordinary matter-of-fact lives, and not leave them to be tempted by vice and immorality for relaxation. We must appeal to their best instincts, instincts that all have, and which it is just as easy to satisfy as the very

lowest instincts. All these thousands of people that are working for their daily livelihood, and live a confined life in our great industrial centres, can never be awakened to the finest opportunities if they do not see how the march of progress has taken place, and that can only be shewn them through examples of the great workers of past ages.

In national, municipal, and individual life, there should be but one aim, and that is advancement in the highest sense. The wish of the parent that his, or her, child should succeed more than he or she did—and it is the wish af all true parents—should be carried forward beyond our domestic life into the life of our cities and our nation, and as we in our home lives feel, and have confidence in our own children, and do all that we can to encourage them in the future, and make them more prosperous and greater than we ourselves are, so in a wider sphere must we do all we can for the community and nation we live in.

The world to-day is one great neighbourhood, and we in our district are as manly and courageous as those in any other district. All we have to do is to see that our children have better, or at least equal, opportunities of cultivating the natural gifts as those of any other district. The most dangerous man I know of, is he who quotes from his own past experience (especially if he has lived in a narrow grove), and tries to regulate and influence the present generation upon his own experience. What we must do to-day, is, in all walks of life to put the experience and examples of the world before our own people, and this we can do to a great extent by letting the people see as much as possible examples of past greatness.

I have often been struck with the training of practical America. Last year, at a country house, a child came into the room, and on being asked what she had done at school that afternoon, she answered that "We went into the country, and heard all about the birds and flowers." The child was excited and happy, a new life had been opened up to her, and I should say that lesson would bring more out of the child than many lessons in a stuffy schoolroom. So in the large cities, we cannot take all our children direct to nature for inspiration, but we can do the next best thing: we can found

museums and art galleries, with examples of the greatest geniuses of the world who have had nature for their guide and master, and we can there turn loose the children of our cities; and I feel sure the result will be something which we to-day cannot realise. No one reads a book without being influenced for good or bad; so such beautiful things as pictures or statuary must influence all who see them. How receptive the mind is for all that is beautiful, and how it retains the impression, and how that impression elevates life and makes one by degrees shun all that is ugly. One often hears the expression, "a child of nature." It only means one who can appreciate all that is beautiful; and we really don't realise how many there are. We must make our art museums and art galleries as far as possible take the place of nature, so that our people will not only become more practical and beneficial citizens, but they also will get greater happiness and pleasure out of life, and through the beauties they have been brought in contact with, will live nobler and better lives.

These ought to be the results upon the community of all such institutions as those with which you gentlemen are connected; and I am proud to think that our art gallery and museum has been founded by our greatest manufacturer, because it proves that he realises that there is something to be done for a community which is of more permanent and lasting nature than the mere giving of money.

Gentlemen, you are all closely connected with one great national work, the building up of the Empire through the elevation of the communities and the individual. I trust your deliberations will assist you practically, and I hope, for the nation's good, in your different centres you will be supported by citizens who feel that "man is the noblest work of God," and that all must be done to develop his most refined qualities.

A Museum Microscope.*

WHILE intended primarily to show a limited series of selected examples in type-collections illustrating botany or zoology or geology, this microscope should find a wider field of usefulness in the corresponding sections of the general natural history collections in a museum. It is so arranged in a framed glass case as to allow an unskilled observer to make use of it for the examination of any one of twelve objects without risk of damage to the microscope or to the objects. Three parts of the instrument project through the case; the eyepiece, a milled head for focussing, and a milled edge that affords a means of bringing under examination whichever object is desired. As these parts pass through dust-tight openings in the wooden frame of the case, the microscope is not liable to damage from dust or by dusting.

Considerations of convenience in museum use have determined that it is best to have the optical axis of the microscope horizontal. In front of the object glass there is a revolving brass disc—the microscope stage—pierced in twelve places and fitted with spring clips for fixing twelve slides. The disc has been made of such size as to take eight slides of the normal dimensions (3in. × 1in.), and four of a shorter type. The centre on which it revolves has been so placed that the milled edge of the disc projects through a slot in the left side of the case and affords a convenient means of bringing the slides successively under examination.

The eyepiece projects through a broad black bar of wood which passes right across the front of the case. Thus whichever eye the observer may use at the microscope, he finds a portion of this black surface opposite the other one. This renders it quite unnecessary to close one eye in using the instrument.

The milled head for focussing is on the right side of the case, and stops check the travel of the tube, so that the visitor can neither run the object glass against the slide, nor remove

* Arranged by F. Grant Ogilvie, Director of the Edinburgh Museum of Science and Art, who exhibited the microscope at the Edinburgh meeting of the Association, July, 1901.

any part of the instrument. These stops limit the travel, so that for a normal eye there is always visible some indication of the object: this simplifies the process of focussing.

A light spring, pressing against the edge of the rotating disc stage, gives the requisite stiffness to its motion, and indicates, by a slight click, the position in which the centre of the slide is in the optical axis of the microscope. When the instrument is put in its place in the museum, the mirror should be adjusted so that it has in line a window for day illumination and one of the artificial light centres—gas or electric—for evening work. If this cannot be arranged, an auxiliary plane mirror may be brought into requisition. When all has been fully arranged, the hinged cover is screwed down.

By the addition of polarizing apparatus, not shewn in the illustration, the value of the microscope for the examination of such objects as rock sections is greatly increased. The polarizer is supported in a position between the mirror and the object, and a means of rotating it is provided by a connection with a disc projecting through the case similarly to the larger one which forms the microscope stage.

As placed in the Edinburgh Museum, the microscopes stand on blocks on small tables 2ft. 6in. high, the eyepiece is 3ft. 11in. from the floor, and a stool is provided for the observer. The advantages of the sitting position are not only that it is easier and steadier, but also that visitors differ less in "height sitting" than in "height standing," and that such differences as there are may be allowed for by each adjusting for himself the distance of the stool from the table. The right-hand ledge of the table is available for a note-book or sketch-book, while on the left is fixed a frame containing key diagrams to the preparations on the slide. Each slide and its diagram bear the same number, and a reference from the one to the other will facilitate the identification of the structures seen under the microscope.

These instruments should prove of much value, not only in the several sections of public natural history museums, but also in colleges and schools. For use in relation to a course of lectures the set of slides on the stage would be changed from time to time, as required to illustrate the successive sections of the subject of instruction.

As will be seen by our advertising pages, they are now supplied by Messrs. W. Watson and Sons, 313 High Holborn, London, W.C.

Opening of the Bloch Museum at Lucerne.

[FROM THE "DAILY CHRONICLE."]

THE late M. de Bloch was in the habit of saying that if only people could be got to study the more essential features of warfare, as apart from its transitory glories, war as a human institution would exist only in the domains of history. That is the central idea and guiding principle of the Lucerne Kriegs-und-Friedens-museum, which was opened with a good deal of ceremony on June 7. The founding of the museum, curiously enough, synchronised with the outbreak of the South African war, and its opening takes place exactly a week after that has come to a formal close.

The new museum, which is situated next to the railway station, is even in its external appearance a considerable addition to the attractions of Lucerne. It is built to harmonise with its surroundings, and with its attenuated spires and tiled roof looks more like a piece of old Lucerne than a modern building. The building is only of wood and stucco, and will be replaced by a stone building if, after six years' experience, it is proved to be a success. The exhibits are all in position, and it is in them that the interest of the museum lies. The apprehension had been widely expressed by the late M. de Bloch's friends that he would make the museum too much of an instrument for propagating his own particular views. M. de Bloch, however, very wisely took the advice of the military men who were associated with him on the committee, and restricted the scope of the museum to the purely historical and illustrative aspect of the art of war. There is, indeed, no trace anywhere in the four great rooms of any of M. de Bloch's theories as to the impossibility of war.

The rooms in which the exhibits are shewn are at present merely vast sheds, each divided into a number of compartments shewing the weapons and mechanism used in warfare from the earliest times up to as late as the last stage of guerilla warfare in South Africa. The entrance hall is altogether taken up by a collection of weapons which is probably the most comprehensive ever got together. It begins with flint

arrow-heads from the stone age, and ends with Maxim guns and a Swiss mountain battery. There is also in this room a vast collection of battered iron plates and furrowed logs of wood shewing the penetrative power of shells and rifle bullets of different sorts at various ranges. There are also two ringed brass cannon of the fifteenth century face to face with modern fortress artillery. The room leading out of this is devoted to "Strategy and Tactics," beginning with Greece and Rome and ending with South Africa. The chief features in this room are the large models in relief of famous battlefields. Of these there are altogether about forty in the museum. Switzerland, as might be expected, is best represented, Morgarten, Sempach, and Marten being shewn in relief. In the third room perhaps the most useful of the exhibits are the texts of all the great treaties entered into between European Powers. The treaties are printed in large characters, and ranged in frames around the walls. South Africa is dealt with in two large tableaux, one shewing the effect of the lyddite bombardment upon Cronje's laager, and the other illustrating Boer methods of guerilla warfare. The next room is divided into compartments, in one of which is shewn "The History of Fortress War from Ancient to Modern Times." Another compartment contains a gruesome collection of human skulls and skeletons riddled by bullets or shattered by shells. In this room also is the skeleton of a horse, riddled also by bullets fired at different ranges, and shewing the difference in explosive effect as the range increases or decreases. The walls of another compartment are hung with coloured diagrams shewing the military expenditure of the great European Powers, and the cost of wars in the past. The naval section is rather imperfect, as no models have yet been acquired, and the subject is only dealt with pictorially.

In the two plots of ground outside the museum there are short sections of full-sized trenches, a copy of a Boer covered trench, and of a Boer wire entanglement, and specimens of a portable bridging material. But nothing in the museum compares in interest with the dioramas, which occupy a gallery to themselves. The object of these is to shew the difference between tactical methods in past times and in the

present. The foregrounds are admirably put together with real rocks, real trees, and real uniforms, the backgrounds being painted by Kaufmann and other famous scene-painters. The Russian attack on Gorni Dubniak in 1877 is contrasted with a British attack upon the Boers, carried out in dispersed formation. The effect of these tableaux is admirable, and indeed they proved so attractive to the visitors that the rest of the museum was comparatively neglected.

The museum, which will be open every year from the beginning of April until the end of October, is almost entirely under military management. It is, indeed, essentially a museum of war, its only propagandist exhibits being two large pictures, one depicting a Swiss village in time of peace, the other shewing it in time of war. Altogether the museum is well worth a visit, though I confess the absence of M. de Bloch's propagandism is rather a surprise.

M. Frederic Passy, in opening the museum, said he hoped that he was opening a temple of perpetual peace.

A bust of M. Jean de Bloch was subsequently unveiled inside the museum.

New Building for the Smithsonian Institution.

ARRANGEMENTS are now being made by the secretary of the Smithsonian Institution for carrying out the instructions of Congress in relation to the preparation of preliminary plans for an additional fireproof steel-frame brick and terra cotta building, the cost not to exceed $1,500,000, for the United States National Museum, to be erected when appropriated for on the Mall between the 9th and 12th Streets. For this purpose an appropriation of $5,000 was allowed, and the plans will be sent to Congress at its next session.

Mr. Richard Rathbun, assistant secretary of the Smithsonian Institution, is now engaged in work necessary in the preparation of these plans. He has already in his possession a very large amount of data concerning the manner in which the great museums of the world have been designed and constructed, and will add to his collection of drawings, illustrations and descriptions of these buildings, so that the plans to be prepared for Congress will be made after a careful study of the plans of all the great museums of the world, and especially of the modern structures which embody the most approved ideas concerning the needs of such an institution.

The location of the building Congress proposes erecting on the Mall has been fixed within the limits of the 9th and 12th Streets on the northern portion of the Mall, facing the south. This location accords with the plans of the park commission, which contemplate the erection of public buildings, chiefly for purpose of exhibitions, along both sides of the Mall. The commission proposed having all these buildings of classic style, and to be built of white marble, but the expense involved by using such material caused a provision in connection with the authorization for the plans that requires the use of brick and terra cotta. There are a great many senators, as well as representatives, who think it would be a great mistake, at this stage of the development of the city, to

put up another building on the Mall of brick and terra cotta, and their influence will be exerted to secure a building of stone, and preferably of white marble.

The tentative plans that will be laid before Congress next winter will have for their important feature the arrangement of the exhibition and work rooms of the museum. The most approved plan for museum building is to have workrooms adjoining the exhibition halls and corridors, so that the greatest convenience may be secured. The proposed building will be about 550 or 600 feet long, by a width of about 450 feet. It will have a basement under the entire structure, so that some classes of workshops and ample storage room may be provided. There will be two floors on which exhibits will be displayed, and a roomy garret. It will be constructed so that it may either be added to or another building may be put up and connected with it by a corridor.

The building now occupied by the National Museum was put up as a temporary structure, which was made necessary when the many valuable exhibits at the Philadelphia Centennial Exhibition in 1876 were presented to the Government. Except in a restricted area at the corners of the building, it has no basement, and is but one story high, except in a small portion of the structure, which provides some office and storage space. Very extensive repairs have been needed since the building was erected about twenty-three years ago, in order to keep it in a habitable condition.

Not only is the exhibition space in the building more crowded than is usual in the great museums of the world, but several buildings in the neighbourhood of the Mall have been rented and packed with most valuable material. A couple of temporary buildings have been put up in the Mall, and, together with an old fish commission shed, have been and are now being used in which to shelter the valuable collections that are owned by the museum. There are subterranean passages beneath the main building of the Smithsonian Institution, fit only for coal vaults, that are filled with this valuable material, and in which men of scientific attainments that have made their names known the world over are obliged

to work, in an atmosphere that bespeaks a dungeon. In fact, the museum has long since been obliged to decline costly donations, because it has had no suitable place in which to store them, and in fact no place at all.

When it secures its new building, with twice as much room as it now has, enough material can at once be moved in it and placed on exhibition to fairly well fill all the available floor space, besides using the exhibition rooms of the old building. The lack of fireproof conditions in the old building is a constant menace to the rare collections gathered there.

The new building will contain many attractive features of the nature of some of the exhibits now in the old building, but which cannot now be added to because of lack of room. The Indian groups at the museum, and other educational exhibits of that nature, are only indications of what can be accomplished by the museum when its facilities for exhibition are enlarged.

Museum Reports.

ONTARIO ARCHÆOLOGICAL REPORT.—The Annual Archæological Report for the Province of Ontario for 1901 gives a list of nearly 3,000 new specimens added to the museum, with a most admirable series of illustrated notes on the important ones, and is followed by several original papers on subjects of great interest to all workers in the, at present little known, field of pre-historic American folk-lore and life. The papers on Mounds and Burial Places, on Animal Remains found on Indian Village Sites, on Canadian Pottery (Aboriginal), are not only well written but are records of value, and their intelligibility is much amplified by the carefully drawn plans and figures.

The Reports of the Albany Museum, Graham's Town, Cape of Good Hope, for the years 1900 and 1901, state that the museum was founded in 1855 by the local Literary and Scientific Society, and subsequently transferred to Government control. As is usual the work is hampered for want of funds, but good progress is being made with the arrangement of the specimens, most of which are being classified by voluntary helpers. Two spiders new to science have been discovered. Fifteen thousand nine hundred and sixty-one people visited the museum in 1901, which is to be considered a good number, in view of the martial law existing in the colony. There is a long list of additions, chiefly of South African origin.

The Report of the Perak Museum for 1900 shews a large addition of local flora and fauna, and very fine articles of Malayan manufacture of a kind which European influence is rapidly destroying. Fifty-one thousand and forty-seven persons visited the museum during the year.

The Transactions of the Perthshire Society of Natural Science, Vol. 3, Part 3, for 1900-01, has some excellent papers read before the society. Those on natural history subjects shew powers of observation worthy of Gilbert White, and the society is to be congratulated on having such members. One on "Gulls the Links of Land and Sea," has all the delicate

feeling of Richard Jeffries; the notes on Ecuador give valuable information about a country into which the British tourist has not yet penetrated; and the paper "On the Occurrence of a Zone of Annelid Burrows across the Southern Highlands of Scotland" is of great scientific value. There is also the presidential address by Henry Coates, F.R.S.E., reviewing the work of the society.

We must congratulate the Yorkshire Philosophical Society on its Annual Report for 1901 (we do not want to be thought captious critics, but we think MCMI. rather archaic). The work done has been of a most valuable and enduring type. We have had the opportunity of seeing the excavation of the Choir of St. Mary's Abbey Church, a summary of which, with plates, is given. This and the reproduction of the inscription on the four principal Bars of the City, one of which, on Bootham Bar, we have had the pleasure of reading, are in every way examples of how such work should be done. An invaluable find of a Roman coffin, containing a bone tablet inscribed "Soror ave in Deo vivas," has been presented to the society by Mr. E. Taylor. There are continuations of the Catalogues of the Collections of Birds and Plants, and a charming essay on William Etty, the painter, by Miss Moore.

The Report of the director of the institutions of Science and Art, Dublin, for the fifteen months ending 31st March, 1901, is a record of steady progress and of continual improvement. The remark is very true, though the importance of it is not always so apparent to Committees as it ought to be, that "an extension of the practice of visiting foreign museums and institutions is absolutely necessary if the museum collections and other institutions are not to fall behind those in other countries." In the last year 425,661 people visited the museum, and in three years 36,244 copies of the halfpenny guide have been sold. During the winter a series of informal lectures has been given and well attended. Instead of locks a special pattern of padlock has been introduced for the museum cases, and appears worthy of adoption. Some valuable additions have been made, especially in pottery, porcelain, and glass, principally from the Myers collection, and in Irish antiquities, and the museum has been so fortunate as to

acquire the unequalled collection of Irish birds' eggs from Mr. Ussher. The National Library of Ireland had 148,405 readers during the year. The Metropolitan School of Art is doing good work. The Royal Botanic Gardens, Glasnevin, were visited by 407,770 persons. The appendices to the Report give complete lists of the additions to the museum, and accounts of the work done or in progress.

The Directory of the Royal College of Science for Ireland for the session 1901-1902 gives a syllabus of the various classes and a list of associates.

The Report of the Trivandrum Museum and Public Gardens for the year M.E. 8076, *i.e.*, 1900-1901, is a most valuable one. The curator has done much collecting of the fauna of the district (up to now at his own expense, though this is going to be remedied). There were 174,166 visitors during the year, as against 137,211 the previous one. A collection of valuable coins has been acquired. Amongst the many trials of a curator in this country, there is fortunately not that of having the ivorine labels carried off by birds and rats. In the zoological department careful records are given of the longevity and breeding capacity of the animals in captivity. Wild animals venturing into the gardens are apparently usually caught and annexed to the collection.

The Reports of the superintendent of the parks and of the curator of the museum of the county borough of Stockport allude to the death of that old and enthusiastic collector, Mr. John Tym, formerly curator. Most of the time since the appointment of the present curator has been spent in re-arranging the specimens. There were 40,199 visitors during the year.

The Report of the Free Library and Museum Committee of the borough of Bootle for the year ending March 31st, 1902, shews that much useful work has been accomplished. The curator has given a series of Free Museum Addresses of an instructive character, which were well attended.

The Annual Report of the Ruskin Museum, Sheffield, is one of the most creditable reports ever issued from that most delightful and charming institution, and the curator is to be

sincerely complimented not only on the vast amount of work he has done but also on the excellent results which have followed, and we hope have encouraged him in his efforts. Forty thousand five hundred and eighty people visited the museum, as against 38,067 the year preceding, and what from the founder's point of view is of infinitely more importance 768 students studied the works in the Library and Print Department. Seven hundred and twenty-five copies of the Museum Hand-book were sold. Various exhibits of drawings illustrative of art subjects have been held, and lectures given by the curator.

The 30th Annual Report of the Public Library and Museum of the city of Hereford for 1901-1902 gives details of many improvements which have been effected. A legacy of £1,000 has been received by the will of the late Sir Joseph Pulley, Bart., and this has been wisely set aside to be expended in the much needed structural alterations of the buildings. A list of additions to the library and museum is given.

CAMBRIDGE MUSEUMS.—The Thirty-sixth Annual Report of the Museums and Lecture Rooms Syndicate (for 1901) has recently been issued. The most important remark contained in it is an expression of hope that the removal of the geological collection in the Woodwardian Museum to the Sedgwick Museum will have commenced before another annual report is prepared. Among the more important additions which have been made to the collections under the charge of the Syndicate, the greater part of an associated skeleton of a *Megatherium*, presented by Mr. A. E. Currie, of Buenos Ayres, deserves special mention. Now that the bones have been articulated it is evident that the skeleton is one of the most complete in existence. Mr. J. S. Budgett has been employed during the past year in the museum of zoology, and has made numerous excellent preparations of fishes, amphibians, and reptiles, many from his own collections made in Paraguay and in the river Gambia. Dr. Charles Hose, of Borneo, has presented to the museum of human anatomy an unusually fine series of primates. Mr. S. F. Harmer reports that four bottles without labels contained a number of invertebrates bearing metal numbers, which prove to have formed part of the collection

made by Charles Darwin, during the voyage of H.M.S. "Beagle." "Although many of the specimens were ruined by maceration or by having lost their labels, about 70," he writes, "appeared to be worth keeping, and their history could be ascertained by their numbers, which corresponded with those in Mr. Darwin's MS. catalogues kindly lent to me by Mr. F. Darwin. In one or two cases these specimens are important in consequence of being referred to (without determination) in the pages of the 'Beagle Journal.' I am informed by a chemical friend that the metal labels are made of tin. It is worthy of notice that their distinctness has in no way been impaired by an immersion of seventy years in weak spirit." Curators, please note! Professor Newton has presented a carefully catalogued collection of bird breast-bones, representing about 1,250 species from all parts of the world. There is a very large list of additions to the zoological museum, including cephalopoda from Messina, a parasitic cirripede (*Anelasma squalicola*), an *Orycteropus capensis* from the Orange River Colony, a membrane and a skull of *Phacochoerus africanus* from the Transvaal, skeletons of *Cogia breviceps*, of a female *Cervus davidianus*, and of the Soay sheep, insects from Borneo and birds from Fiji, the last from the collection of the late L. W. Wiglesworth.

THE NATURAL HISTORY MUSEUM OF VALPARAISO.—A report on the work of this museum for 1901, by its director, Professor Charles E. Porter, is contained in *Revista Chitena de Historia Natural* (February, 1902). From this we learn that the zoological section has received important donations, such as fish of Juan Fernandez, insects of Brazil, Ecuador, and Europe, and fifty species of English birds. Among the specimens acquired by exchange are mentioned 253 species of insects from the province of Nuble. The chief work during the year has been done on fish, birds, and arthropods. The botanical, ethnographical, and geographical sections have also received certain accessions, but we gather that the staff is not large enough to pay equal attention to these departments of the museum.

General Notes.

CONVERSAZIONI IN MUSEUMS.—The trustees of the British Museum have recently granted the use of the Natural Hisory Museum in Cromwell Road, for the purpose of holding soirées, to the following bodies:—Colonial Institute, Institute of Electrical Engineers, Royal Geographical Society, and the Surveyors' Institute. The portions of the museum open on these occasions were the central hall, north gallery (the former British gallery), and the galleries of fossil mammalia and fossil reptilia. It is possible that this generous action on the part of the trustees makes the museum known to a number of people who otherwise would never enter its walls, and who will very likely never enter them again. The societies, it is hoped, are grateful to the trustees for their action; but whether the staff of the museum are equally grateful seems to us very doubtful. There is a museum in the colony of Mauritius, and Mr. Daruty de Grandpré is its superintendent. From a recent report we gather that the museum struggles to exist under many disadvantages, and one of these is the lending of the rooms, by the authority of the governors, to various bodies for their own purposes. Mr. De Grandpré writes:—"I am sorry to say that the temporary occupation of the rooms of the institute for an aim stranger to its destination causes grave inconveniences which I think it my duty to point out. . . . . Collections being frequently removed and handled so awkwardly can scarcely be expected to stand much longer such handling; besides, these collections heaped up without order are never put back in their respective places by the parties who have enjoyed the privileges which have been granted to them, and the order is only restored at the cost of my department." We look nearer home, and experience leads us to sympathise very heartily with the superintendent of the Mauritius museum.

PRESERVING FLUID.—Dr. G. Marpmann recommends the following for the fixation and preservation of anatomical objects:—Sodium fluoride, 50 grms.; formaldehyde (40 per cent.), 20 c.cm.; water, 1000 c.cm. For prolonged preservation, specimens may be transferred to the following:—Glycerine (28° B.), 50 c.cm.; water, 1000 c.cm.; magnesium chloride, 100 grms.; sodium fluoride, 20 grms. This method has given good results in the preservation of reptiles.

HOW TO PRESERVE FUNGI WITH THEIR NATURAL COLOURS.—A valuable series of recipes is contributed by Mr. L. Lutz to the *Bulletin* of the Societé Mycologique de France (1901, pp. 301-307), under the title, "Procédés de conservation des Champignons avec leurs couleurs."

AT HOME.

WELSH ANATOMICAL MUSEUM.—We learn from *Nature* that an anatomical museum, endowed in memory of the late Professor A. Hughes, was formally opened at the South Wales and Monmouthshire University College on June 21. Professor Hughes, who died of enteric fever contracted in South Africa, was the first occupant of the chair of anatomy at the college, and when he left to take a similar position at King's College, London, he gave £350 with which to purchase the nucleus of the anatomical museum. To his memory, and in recognition of his special services to medical education in Wales, it was decided to endow the museum permanently, and a fund was opened, towards which £1,775 has been subscribed. Of this amount £120 has been set apart for the foundation of an Alfred Hughes medal, to be awarded annually in the subject of anatomy.

A MUSEUM OF HYGIENE.—Readers of our articles on "Hygiene as a Subject for Museum Illustration," will be interested to learn that the nucleus of such a museum has been established at Cambridge. A list of the specimens is given in the above-mentioned Report of the Museums and Lecture Rooms Syndicate. They are grouped under the following headings :—Drainage ; Soils ; Ventilation and Heating ; Water Supply ; House Construction ; Mounted Specimens of Diseased Structures of Animals ; Diseased Meat Specimens (unmounted), presented by Dr. Collingridge ; Diagrams.

HULL MUSEUM PUBLICATIONS.—No. 8, Hull Coins and Tokens ; and No. 9, Quarterly Record of Additions (price one penny). The pamphlet on coins and tokens by W. Sykes is a most valuable and interesting contribution to the study of our old coinage, and might with advantage be imitated by other museums which have similar collections. A mint was set up in Hull by Edward I. in 1300, and two silver pennies of that period are in the collection. The tokens of the seventeenth, eighteenth, and nineteenth centuries are numerous, and some are unique. A word of praise is due to the illustrations of the coins and tokens, both obverse and reverse of typical specimens being shewn. The Quarterly Record of Additions, compiled by T. Sheppard, F.G.S., contains a list of specimens, with notes and illustrations of the principal ones. A number of eoliths, if these primitive flint instruments are to be dignified by this name, several neolithic weapons, some of Mr. Seton-Karr's early stone implements from Somaliland, two exceptionally well preserved Roman earthenware vessels from South Ferriby, and various local antiquities make up a series

aluable and unique additions to a museum which is ily growing in importance largely owing to the persever- and hard work of the curator.

IE NEW GUILDHALL PICTURES.—According to the of Mr. Cassiott's will, the pictures which he has ıthed to the City Corporation, London, are to remain in ssession of his widow as long as she lives, at Elmworth ², Upper Tooting, where the collection is now housed. y-five of the works, which, it is understood, comprises st the whole of the bequest, were insured for £71,145, ch may be taken as about their value. Mr. Gassiot's ference in art was somewhat limited, and was confined lmost wholly to the English school. One or two Dutch pictures are included in the bequest, and there are two examples of James Tissot, painted before he devoted his talent for detail to scriptural subjects. Amongst modern English masters Millais is represented by "My First Sermon" and "My Second Sermon," while Sir Lawrence Alma-Tadema, Briton Reviere, Sidney Cooper, Marcus Stone, and T. Goodall are included. Artists of an earlier epoch whose works will in the future be seen at the Guildhall are Landseer, P. Nasmyth, David Roberts, Constable, J. Linnell, Tom Faed, and C. Stanfield. Altogether Mr. Cassiot's pictures will make a noteworthy addition to the London Guildhall gallery.

BRITISH MUSEUM.—The negotiations for the purchase by the British Museum of the splendid collection of drawings and etchings by artists of the Norfolk School, formed by Mr. James Reeve, curator of the Norwich Museum, have been brought to a successful conclusion, whereby the Print-room will be immensely enriched in a class of drawings in which it was not so well represented as might have been expected. The collection, which has lately been received in the department, is especially rich in examples of works of the Colmans, Cromes, Geldart, Daniell, and other artists of the Broad district. Many interesting letters, papers, and documents relating to the artists and their works have also been purchased by the Museum with the collection.

An important series of nearly 2,500 South American birds has been added to the collection of birds in the British Museum (Natural History). The series represents the result of the labours of Mr. P. O. Simons, a collector in the employ of the museum, who, according to a telegraphic report, seems to have been brutally murdered on the Chili-Bolivian boundary just as he had completed his explorations and was on the point of coming home. Commencing with Ecuador, Mr. Simons travelled through Peru to Bolivia and Northern Argentina, visiting the highlands and other localities

which no collector had previously explored, and had been at work in South America for about three years when he met his death. Mr. Simons was one of their best colleetors, and had been the means of adding thousands of specimens to the national collection at South Kensington.

NATURE STUDY EXHIBITION.—The project of the Nature Study Exhibition has met with a gratifying reception. The exhibition opened on the 23rd of July in the gardens of the Royal Botanic Society, Regent's Park, and will remain open to the 5th of August. The exhibits will be drawn only from English-speaking communittes. Technical education committees throughout the country are co operating in the work.

BRITISH MUSEUM CORONATION EXHIBITION.—The trustees of the British Museum have recently published the catalogue of the Coronation Exhibition, which has been arranged in the King's Library, illustrating the history of English Coronations from the Tenth Century. Among the manuscripts the earliest is a copy of the Four Gospels, in Latin, illuminated, and supposed to have been presented by the Emperor Otto to King Athelstan in the year 929. This book is stated to have been used at the coronations of English Kings for the taking of the Coronation oath. The Coronation pledge devised by St. Dunstan in 973, and used up to the time of Edward I., requires the King to promise "in the name of the Holy Trinity" that he will "forbid robbery and all unrighteous things to all orders," and "enjoin in all dooms justice and mercy." Another manuscript is a narrative by Matthew Paris, monk of St. Albans, of the coronation of Henry III., in 1216. The little King, who was only nine years old, took the oath before the Holy Gospels and relics of many saints, that he would "blot out bad laws and unjust customs, and cause the good to be observed by all." Twenty years later Eleanor of Provence, Henry III.'s Queen, was crowned, and the narrative says there was "grete strif amonges the ministres of the kinges household for their seruices. Finally, it was agreed that "all iightes should be reserued to euery man without prejudice," and we are told that one noble served the "nappery" and another the "salt and knyves," but the Earl of Arundel was excluded from the office of butler, being under excommunication for interfering with the hounds of the Archbishop of Canterbury. The "Liber Regalis," or Coronation Service of the Fourteenth Century, provides that early in the morning the new king is to be raised up with all courtesy and reverence, "washed, as the custom is, and arrayed in clean clothes" for the great occasion. Music is given for the service. A manuscript picture of the coronation of Marie de Luxemburg, Consort of Charles IV. of France, shows that the

King himself places the crown upon her head. The "Proclamation" made before the Coronation of Richard III., provides that on the great day "no person take any manere of loging within the citie of London or suburbes," except such as shall be allotted him by the King's harbingers, and adds the salutary regulation that "euery man bee in his loging by X. of the clok in the night." Engravings and books, as well as manuscripts, illustrate almost every detail of the ceremonies and pageants, and several foreign coronations are included for purposes of comparison. There is also a series of nearly 50 coronation medals from 1547 onward.

WORTHING MUSEUM.—Mr. John Morgan is engaged in arranging the museum at Worthing, which has been founded chiefly by Dr. Nicholls. Mr. Morgan has presented to the museum some of the corals and shells which formed such an attractive and important exhibition at the South London Art Gallery, Peckham, one of the most extensive and scientifically complete collections of coral that had ever been brought together by a private individual.

TAUNTON CASTLE MUSEUM.—The Earl of Cork has consented, on the request of the Somerset Archæological and Natural History Society, to perform the ceremony of reopening the Great Hall of Taunton Castle, which has been rearranged as part of the county museum.

THE SCOTTISH NATIONAL PORTRAIT GALLERY.—Mr. John Ogilvy, Dundee, writing to Sir John Stirling Maxwell, M.P., on the subject of the promise by Sir Michael Hicks-Beach to give an additional £1,000 to purchase pictures for the Scottish National Gallery, suggested that the pictures bought might be lent for brief periods to the art and picture galleries in Dundee, Aberdeen, and Glasgow, and this might also apply to valuable pictures in the Edinburgh National Gallery. The following reply has been received:—"There is no reason why the National Gallery should not have power to lend pictures as you suggest to other institutions in Scotland. Indeed, the power would exist as a matter of course, unless expressly forbidden by its constitution, or by the terms of the bequests or gifts of particular pictures. It is clear, however, that in a small collection such as our National Gallery is always likely to be, it would not be convenient to make a general practice of lending important pictures. Students would never know where to find the contents of the gallery. Against the practice must also be set the inevitable risk in moving pictures. For those and other reasons I should be sorry to see it made a condition of a grant for the purchase of pictures that the pictures bought should be circulated to other galleries; but I should be quite prepared to leave the matter to the discretion

of those responsible for the care of the gallery. South Kensington can hardly be taken as a precedent. That vast collection has a special loan department, and most of the objects loaned are never exhibited in the museum, having been superseded by better examples. Indeed, owing to the want of space, it has hitherto been impossible to show nearly all the objects stored in the museum. Objects of first-class importance are rarely if ever allowed to quit the museum."

MUSEUM ROBBERY, BELFAST.—Some of the objects lent to the Belfast Art Gallery from the Victoria and Albert Museum have been stolen. So far no official particulars have been published, but it seems that the robbery has been carried out by expert thieves, who have taken some objects of great value, and judging from the way in which they have done this it behoves all museums which have loans from the Board of Education to take special precautions to safeguard them, for it is quite obvious that the thieves have been endeavouring to secure access to all the exhibition cases in circulation, notwithstanding the fact that the keys of them are kept at South Kensington.

ABROAD.

PRETORIA MUSEUM.—Dr. Gunning, the director of the Pretoria Museum under the late Boer Government, will retain that position under the British Government, and he has also been appointed superintendent of the new Zoological Gardens which are to be established in Pretoria.

UGANDA EXPEDITIONS.—Uganda is at present the object of two widely different scientific expeditions. The Royal Society have sent out three eminent doctors to investigate the causes of sleeping sickness. Dr. Castellani is the bacteriologist, while Dr. Low and Dr. Christy will attend to the parasitological portion of this expedition. Then Dr. Burdett, of Cambridge University, left last week to collect mammals and birds, to study the fishes, and to report on the habits of the okapi of Mbuga, for the London Zoological Society. He has already been twice to Gambia, and has established a reputation as an African traveller and a collector of fishes.

ALBANY MUSEUM, GRAHAMSTOWN, SOUTH AFRICA.—The fine new museum buildings in Somerset Street, Grahamstown, were opened by His Excellency, the Governor. At the opening ceremony Dr. H. Becker, F.L.S., F.S.A., president of the museum committee gave an interesting address to the distinguished visitor, in which he summarised the history of the museum from its early beginnings to its present large

proportions. His Excellency in reply said that the existence of this museum is an indication of the continuous industry of the people of Grahamstown for the promotion of culture and knowledge. and he was glad to think Government had been able to respond so liberally to the desire of the people of Grahamstown for a first-class museum in the Eastern Province. The objects of such a museum are many and multifarious. He would remind his hearers of the constant reproach against Englishmen who, it is said, go abroad and into the Colonies to fight the battle of life, and are content to fight that battle blindly, without finding out anything about the country in which they have chosen to live. "Many of us," said His Excellency, "know very little of what lies beneath the surface of the soil, or how nature works in this colony, and it is in the interests of the country that we should help the men who are giving their time to develop the resources of South Africa." The history of the museum is very interesting, it started in 1855 and has grown steadily. It was commenced first in a small room at Baine's, and then to Whitnall's, from whence it travelled to Bathurst Street, and in 1882 was lodged in the Town Hall buildings, which after a time proving too small, this fine building, the first stone of which was laid by Lord Milner in 1897, was built by Government. The last report of Dr. Schönland, which I have read, shows steady progress. The director of the museum is Dr. S. Schönland, M.A.

Volcanic Eruptions in the Indies.—A small scientific expedition has set sail for the scene of the volcanic eruptions in the West Indies. The party will proceed to St. Vincent first, and then afterwards to Martinique. The Colonial Office will assist the Royal Society in defraying expenses, and the celerity with which the whole affair has been organised has been very remarkable, and valuable results should be obtained.

National Museum of Buenos Ayres.—We regret to hear of the death of Dr. Carlos Berg, who succeeded Professor Burmeister as director of this museum and as the editor of its *Anales*, to which he added a further publication known as the *Comunicaciones*, with a view to securing greater rapidity of publication. Dr. Berg was one of the most cultivated scientific men in the Argentine Republic, and filled for many years the chair of natural history in the university of its capital. He is succeeded as director by the well-known palæontologist, Dr. Florentino Ameghino, from whom, now that he has an assured official position, still more important developments of his remarkable work on the extinct faunas of South America may be anticipated. May we, therefore, join to our congratu-

lations an expression of hope that he may exercise a little more restraint in the naming of his fossil genera and species? Zoologists have laughed long enough at such names as *Ricardolydekkeria* and *Asmithwoodwardia*, and are apt to forget that the author of such monstrosities can possibly be a really excellent palæontologist.

MAGDEBURG MUSEUM.—We have received certain excerpts from some publication, name unknown, referring to a museum which we are inclined, upon mature consideration of all the evidence, to regard as the municipal museum of Magdeburg, in Saxony. We venture to hint to those who are good enough to send us extracts, reprints, and the like, that it would save much trouble if they would kindly indicate where they are from and to what they refer. The natural history section of the Magdeburg Museum appears to be subject to the dual control of a committee of the Natural History Society and a committee of the Town Council, each with its own chairman. The keeper, who himself serves on one of the committees, is Dr. W. Wolterstorff, the well-known herpetologist. There are no signs of the friction that one might expect from such an arrangement; on the contrary, evidences of healthy life and growth. Well over 50,000 visits were paid to the museum during the year 1900-01; its collections were made use of for demonstrations before several societies, and were visited by students from distant places; material was supplied to workers in Italy, in England, and elsewhere. There is a long list of donations and purchases. The most interesting accession appears to be a bull of the musk-ox from East Greenland, in summer coat, obtained through Dr. Sparre Schneider, of the Tromsö Museum, and mounted by Mr. Oswald Gangtoff, taxidermist to the Magdeburg Museum. Mr. Gangtoff has also recently prepared groups of beaver, birds of paradise, fighting-cocks, two families of ptarmigan, with other individual mammals and birds.

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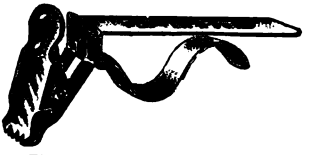

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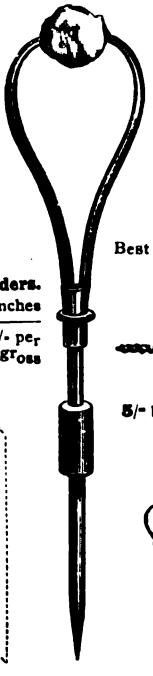

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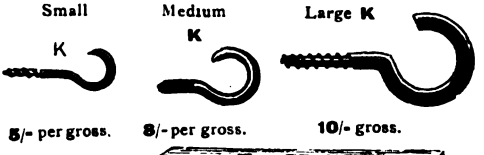

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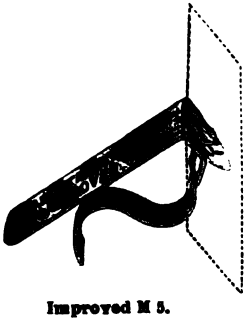

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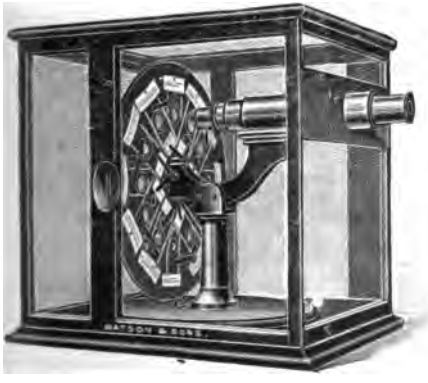

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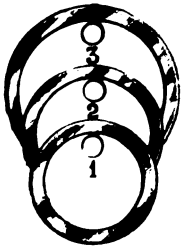

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HENRY IRVING, The Rowans, HORLEY, SURREY.

MUSEUMS ASSOCIATION.

President:
Sir WILLIAM TURNER, K.C.B., B.SC., F.R.S., D.C.L., L.L.D.
Treasurer:
Alderman W. H. BRITTAIN, J.P., F.R.G.S. (Sheffield).
Hon. General Secretary:
E. HOWARTH, Museum, Sheffield.

The object of the Association shall be the promotion of better and more systematic working of Museums throughout the Kingdom. In order to promote a better knowledge of Museums, the Association shall meet in a different town each succeeding year.

That each Museum contributing not less than one guinea a year be a Member of the Association, and that individuals interested in scientific work be admitted as Associates on payment of 10s. 6d. annually.

That each Museum be represented by three delegates, each having one vote. Each Associate to have one vote.

That each Museum belonging to the Association and each Associate receive one copy of the publications of the Association.

That a General Meeting of the Association be held annually, for the transaction of business, the reading o papers, and the discussion of matters relating to Museums.

MUSEUMS ASSOCIATION.

Some of the earlier volumes of the Report are nearly out of print, and Museums requiring complete sets should order them at once. Particulars can be obtained from the Secretary, Museum, Sheffield.

CARTWRIGHT MEMORIAL HALL, BRADFORD.

Museums Association.

Museums Association.

THE BRADFORD CONFERENCE, 1902.

BRADFORD offered a striking contrast to the place of meeting of the previous year, for while Edinburgh afforded examples of a range of museums, many of them with the ripeness and dignity of age, the flourishing Yorkshire town is practically at the beginning of its museum life. And it starts out on this part of its career with the practical common sense and vigour that is generally associated with the county of many acres, giving promise of museum development on broad educational lines, such as are suited to the present position of human knowledge. Undoubtedly the most important portion of the meeting was that devoted to the discussion on the question of the Cartwright Memorial Hall, and its use as a museum and art gallery, led off by a succinctly suggestive paper by Mr. Butler Wood, which is published, together with the discussion, in the present number.

The thoughtful, attractive, and cultured address by the president showed how valuable are the views of an observant layman, with opportunities for extended observations in many lands, and special tastes for appreciating the scope, purposes, and qualities of art and science in furthering the intellectual and æsthetic advancement of the human race. The views of an outsider of these attainments are of the greatest benefit to museum officials.

The other papers read at the conference were of a thoroughly practical character, and they will be published in the journal in due course.

There was a pleasant feeling of cordial comradeship in the welcome given to the Association, with a tasteful and open-handed hospitality on all sides that will make the Bradford conference ever remembered with pleasure, while the business transacted will materially enhance the value of the Association's records.

Museums Association.

Fourteenth Annual Meeting and Conference, Bradford, 1902.

ORDER OF PROCEEDINGS.

MONDAY, JULY 14TH, 1902.

8 P.M. Meeting of Executive Committee, Midland Hotel.

8.30 P.M. Meeting of Council, Midland Hotel.

TUESDAY, JULY 15TH.

10 A.M. TO 1 P.M. Welcome by the Mayor of Bradford.

Address by the President (Councillor W. E. B. Priestley, J.P.).

Reading and discussion of the following Papers:—

"The Re-publication of figures and descriptions of type-specimens of Fossils," by F. A. Bather, M.A., D. Sc. British Representative on the Committee appointed *ad hoc* by the International Congress of Geologists.

"Names on the Labels in Public Galleries," by F. A. Bather, M.A., D.Sc.

"A Design for the Tops of Table Cases," by A. J. Jukes Browne, B.A., F.G.S.

"How to economically organise a Technical Museum," by John Maclauchlan.

1.30 P.M. Luncheon by Invitation of the Mayor of Bradford, in the Midland Hotel.

The Technical College was afterwards inspected, and visits paid to the New Art Gallery and to the present Art Gallery and Museum, where Afternoon Tea was served.

8 P.M. Smoking Concert in the Central Liberal Club.

WEDNESDAY, JULY 16TH.

10 A.M. TO 1 P.M. Reading and discussion of the following Papers :—

"The descriptive arrangement of Museum Collections," by Frank Collins Baker.

"The Temporary Exhibition at the British Museum (Natural History), illustrating the Eruptions of the West Indies," by F. A. Bather, M.A., D.Sc.

"Cartwright Memorial Hall Museum: What shall be its character and scope?" by Butler Wood.

"How Museums may be made more useful to the general public?" by Dr. Jas. Monckman.

1 TO 2 P.M. Luncheon.

In the Afternoon a visit was paid to Messrs. Foster's Works, Queensbury, to inspect the process of wool combing, spinning and weaving.

7 P.M. Association Dinner in the Midland Hotel.

THURSDAY, JULY 17TH.

10 A.M. TO 1 P.M. A practical method of Mounting Coins, by W. H. Edwards.

Mr. E. E. Lowe exhibited some Labels in connection with a special Exhibition of Bacteria in the Plymouth Museum.

Election of Officers. Business Meeting.

1.25 P.M. Train from Midland Station to Ilkley, where luncheon was provided at the Middleton Hotel, then drive to Bolton Abbey and Woods. Tea provided at Bolton. The Members were kindly invited to luncheon and tea by the President.

The Meetings on Tuesday, July 15th, were held in the Technical College, and on the following days the Conference met in the Town Hall, by kind permission of the Mayor and Corporation.

Members were allowed the privilege of Membership of the following Clubs during the Meeting :—

Bradford Liberal Club, Bank Street.

Bradford and County Conservative Club, opposite the Town Hall.

BUSINESS MEETING, JULY 17, 1902, BRADFORD.

The Treasurer submitted his report for the year ending June, 1902, and it was adopted on the motion of Mr. Chas. Madeley, seconded by Mr. Butler Wood.

On the motion of Mr. John Maclauchlan, seconded by Mr. Butler Wood, it was resolved that a Directory of Museums in the United Kingdom be published in monthly parts of eight pages as a supplement to the existing Journal.

On the motion of Alderman W. H. Brittain, seconded by Mr. R. F Martin, it was resolved that a sum not exceeding twenty-five pounds be granted to the Secretary and Editor for assistance.

Resolved, on the motion of Alderman W. H. Brittain, seconded by Dr. F. A. Bather, that the following gentlemen be elected honorary Members of the Association :—

Sir E. Maunde Thompson, K.C.B., D.C.L., LL.D.,
Principal Librarian, British Museum.

Sir William de W. Abney, K.C.B., D.C.L., F.R.S.,
Victoria and Albert Museum, London.

Sir Thomas D. Gibson-Carmichael, Bart.,
Castlecraig, Dolphinton, N.B.

Dr. A. B. Meyer, Museum, Dresden.

Mr. S. P. Langley, Smithsonian Institution, Washington, U.S.A.

The annual report from the Council was adopted on the motion of Mr. Thos. Sheppard, seconded by Mr. C. G. Virgo.

The following letter from the Board of Education was read and ordered to be entered on the minutes :—

Victoria and Albert Museum,
July 12th, 1902.

Sir,

Adverting to your letter of the 4th inst. I am directed to express the regret of the Board that at the present time, it is not found possible to detail an Officer from the Museum to attend the meeting in question, but that the Board are most anxious to facilitate the objects which your Association has in view, and if there are any points which can be reduced to writing, and on which the Board may be able to offer suggestions, they will be glad to do so.

I am, Sir,
Your obedient Servant,
(Signed) GILBERT R. REDGRAVE.

Resolved, on the motion of Mr. W. E. Hoyle, seconded by Mr. Jas. Paton, that the Executive Committee consider the question of holding a tradesmen's exhibition at the annual meetings.

Resolved, that F. A. Bather, D.Sc., M.A. be President for next year.

Proposed by Mr. H. M. PLATNAUER.
Seconded by Mr. GILL PARKER.

Resolved, that Mr. H. M. Platnauer, B.Sc.; and Mr. John Maclauchlan be Vice-Presidents.

Proposed by Mr. W. E. HOYLE.
Seconded by Mr. R. F. MARTIN.

Resolved, that Alderman W. H. Brittain be re-elected Treasurer.

Proposed by the PRESIDENT.
Seconded by Mr. W. H. EDWARDS.

Resolved, that Mr. E. Howarth be re-elected Secretary and Editor.

Proposed by Mr. H. M. PLATNAUER.
Seconded by Mr. JAS. PATON.

Invitations from Prof. J. W. Carr, to hold the next meeting in Nottingham, and from Mr. Jas. Murray, to hold it in Aberdeen, were read.

Resolved, on the motion of Mr. J. M. E. Bowley, seconded by Mr. C. H. Hunt, that the next annual meeting be held in Aberdeen.

On the motion of Alderman Brittain, seconded by Mr. A. Lancaster, the following were appointed members of the Council.

W. H. Edwards (Worcester).
W. E. Hoyle, M.A. (Owen's College).
Prof. J. W. Carr, M.A. (Nottingham).
R. F. Martin (London)
F. Grant Ogilvie (Edinburgh).
William Bradshaw (Nottingham).
Henry Coates (Perth).
Butler Wood (Bradford).
Chas. Madeley (Warrington).
C. H. Hunt (Bootle).
Ald. J. S. Toothill (Bradford).
James Murray (Aberdeen).

A cordial vote of thanks was passed to the Lord Mayor for the use o the Council Chamber and for the generous hospitality which he had shown to the Association.

COUNCIL, 1902.

PRESIDENT.

Councillor W. E. B. PRIESTLEY, J.P.

PAST-PRESIDENTS.

Alderman W. H. BRITTAIN, J.P., F.R.G.S.
J. WILLIS CLARK, M.A.
Professor W. BOYD DAWKINS, M.A., F.R.S.
Alderman A. J. HAWKES.
Rev. Canon NORMAN, M.A., D.C.L., F.R.S.
Professor E. RAY LANKESTER, LL.D., F.R.S.
JAMES PATON, F.L.S.
Sir WILLIAM TURNER, K.C.B., D.SC., D.C.L., LL.D, F.R.S.
HENRY WOODWARD, LL.D., F.R.S.

TREASURER.

Alderman W. H. BRITTAIN, J.P. (Sheffield).

VICE-PRESIDENTS.

THE MAYOR OF BRADFORD (Councillor WM. C. LUPTON, J.P.).
J. E. FAWCETT, J.P.
Councillor J. ARTHUR GODWIN, J.P.
Dr. JAMES MONCKMAN.
E. NAYLOR.
T. PAWSON (President, Bradford Scientific Association).
Alderman J. S. TOOTHILL (Chairman, Libraries and Art Gallery Committee).
WILLIAM WEST, F.L.S.
J. E. WILSON.

COUNCIL.

Elected 1898.

*W. E. HOYLE, M.A. (Owens College).
JOHN MACLAUCHLAN (Dundee).
BEN H. MULLEN, M.A. (Salford).
W. H. EDWARDS (Worcester).
R. F. MARTIN (London).

Elected 1899.

F. BENNETT-GOLDNEY (Canterbury).
*H. M. PLATNAUER, B.SC. (York).

Elected 1900.

*Professor J. W. CARR, M.A. (Nottingham).
F. A. BATHER, D.SC., M.A. (London).
F. GRANT OGILVIE, M.A., B.SC. (Edinburgh).
WILLIAM BRADSHAW (Nottingham).
HENRY COATES (Perth).

Elected 1901.

* Members of the Executive Committee.

GENERAL SECRETARY AND EDITOR.

E. HOWARTH, F.R.A.S., F.Z.S. (Museum, Sheffield).

LOCAL SECRETARY.

BUTLER WOOD (Library and Art Gallery, Bradford).

MUSEUMS ASSOCIATION RULES,

AS AMENDED AND ADOPTED AT THE EDINBURGH MEETING, 1901.

1.—That this Association be called the "MUSEUMS ASSOCIATION," and shall consist of representatives of Museums, of other persons engaged in scientific work or interested in Museums, who may be admitted as Associates, and of Honorary Members. The number of Honorary Members shall not exceed fifteen; they shall be distinguished either for success in Museum work, or for services to the Association; they shall be nominated by the Council, and elected by the Association.

2.—The object of the Association shall be the promotion of better and more systematic working of Museums. In order to promote a better knowledge of Museums, the Association shall meet in a different town each succeeding year.

3.—That each Museum contributing not less than one guinea a year be a Member of the Association, and that individuals interested in scientific work be admitted as Associates on payment of 10s. 6d. annually.

4.—That each Museum be represented by three delegates, each having a vote. Each Associate to have one vote.

5.—That each Museum belonging to the Association and each Associate receive one copy of the publications of the Association.

6.—That the affairs of the Association be managed by a Council consisting of a President, Vice-Presidents, one or two Secretaries, or a Secretary and Editors, a Treasurer, and twelve ordinary Members; three to constitute a quorum; all past Presidents to be *ex-officio* Members of Council. The President, Vice-Presidents, and four ordinary Members of Council to retire each year, and to be ineligible for re-election for one year.

7.—The Council to be elected at the Annual General Meeting, and to hold office for one year. The Council shall have power to fill any vacancies that may occur in its ranks between Annual Meetings. At each Annual Meeting the Council shall, as soon as possible, post in a conspicuous place in the Reception Room a list of the names of those persons nominated by it to fill vacancies in the Council and Officers.

8.—That a General Meeting of the Association be held annually, for the transaction of business, the reading of papers, and the discussion of matters relating to Museums.

9.—The place and time of the Annual Meeting to be determined by the Council,

10.—That an Executive Committee, consisting of the President, Secretaries (or Secretary and Editor), Treasurer, and two other members of the Council, shall each year be appointed by the Council to deal with any matters that may arise between the Annual Meetings; and that the railway fares of Members of the Executive Committee attending meetings be paid out of the funds of the Association—the meetings to be called on the responsibility of the President and Secretaries.

11.—All new rules, and all resolutions affecting existing ones, to be submitted to the Annual General Meeting. One calendar month's notice to be given of all resolutions affecting the rules.

LIST OF MUSEUMS AND ASSOCIATES

BELONGING TO THE ASSOCIATION, WITH THE NAMES OF THE REPRESENTATIVES PRESENT AT THE BRADFORD MEETING.

Names of Curators in italics.

MUSEUMS.

Adelaide, South Australia.
Australian Museum (Sydney).
Baroda State Museum.
Blackburn: *R. Ashton.*
Bolton: Alderman J. T. Brookes, Councillor N. Ramsden.
Bootle: Councillor W. Wadworth, *Charles H Hunt.*
Bradford: Alderman J. S. Toothill, *Butler Wood.*
Brighton.
Bristol.
Canterbury.
Cape Town, South African Museum.
Cardiff.
Carnegie Museum, Schenley Park, Pittsburg, Pa.
Chester.
Chicago, Field Columbian Museum.
Colombo.
Dresden.
Dundee: Mrs. Maclauchlan, *J. Maclauchlan.*
Glasgow: Bailie Bilsland, *James Paton.*
Grimsby Naturalists' Society.
Hereford.
Hull: *Thomas Sheppard.*
Jamaica, Institute of.
Liverpool: *H. O. Forbes*, LL.D.
London, Horniman Museum.
,, Parkes' Museum of the Sanitary Institute.
,, Pharmaceutical Society.
Maidstone: *F. V. James.*
Manchester, Owen's College: *W. E. Hoyle.*
,, Queen's Park: *C. G. Virgo.*
Middlesborough.
Newcastle-upon-Tyne.
Northampton.
Norwich.
Nottingham; *Professor J. W. Carr.*
Perth.
Perth, Western Australia.
Plymouth: *E. E. Lowe.*
Preston.

Saffron Walden.
St. Helens: *A. Lancaster.*
Salford.
Salt Lake City, Utah, Deseret Museum.
Sheffield, Public Museum: Alderman W. H. Brittain, Councillor J. A. Watson, *E. Howarth.*
,, Ruskin Museum: *Gill Parker.*
Stockport.
Sunderland: *J. M. E. Bowley.*
Warrington: *C. Madeley.*
Winchester: *W. H. Edwards.*
York: *H. M. Platnauer.*

ASSOCIATES.

Those printed in italics were present at the Meeting.

Aitken, Mrs. G. B., Edinburgh.
Anderson, Professor W. C. F., M.A., University College, Sheffield.
Balfour, Henry, M.A., Pitt-Rivers Musuem, Oxford.
Bather, F. A., M.A., D.Sc., British Museum (Natural History), London.
Benham, W. B., M.A., D.Sc., Otago Museum, N.Z.
Brunchorst, Dr. J., Bergen Museum, Norway.
Buddicom, Robert A. B.A., F.G.S., Plymouth.
Bullen, Rev. R. Ashington, B.A., F.G.S., Horley, Surrey.
Carpenter, G. H., M.A., Museum of Science and Art, Dublin.
Cheeseman, J. F., M.A., Auckland Museum, New Zealand.
Crake, William V., B.A., Museum, Hastings.
Dawes, Dr. G. H., Sheffield.
Denny, Professor Alfred, F.L.S. University College, Sheffield.
De Vis, C. W., Queensland Museum, Brisbane.
Dixon, R. M., Victoria and Albert Museum, Bombay.
Donner, E. Manchester.
Donner, Mrs. E., Manchester.
Dorsey, Dr. G. A., Field Columbian Museum, Chicago.
Drew, S. H., F.L.S., Museum, Wanganui, N.Z.
Dunsmure, Dr. James, Edinburgh.
Faweett, J. E., J.P., Bradford.
Ferguson, H. S., F.L.S., Government Museum, Trivandrum, India.
Gibson-Carmichael, Sir Thomas D., Dolphinton, N.B.
Giglioli, Prof. Wm. Henry H. R., Museo Zoologico, Florence.
Godwin, Councillor J., J.P., Bradford.
Goodchild, J. G., Museum of Science and Art, Edinburgh.
Goldney, Frank Bennett, Dover.
Gould, I., Chalkley, Loughton, Essex.
Greening, Linnaeus, Warrington.
Hall, Miss Kate M., Museum, Whitechapel, London

Henshaw, Samuel, Museum of Comp. Zoology, Cambridge, Mass., U.S.A.
Hodgson, T. V., Plymouth.
Hovey, E. O., A.B., Ph. D., F.G.S.A., American Museum of Natural History, N.Y.
Hoyle, Mrs. W. E., Manchester.
Hughes, Professor T. McKenny, F.R.S., Woodwardian Museum, Cambridge.
Hutchinson, Jonathan, LL.D., M.D., F.R.S., London.
Hutton, Captain F. W., Canterbury Museum, Christchurch, New Zealand.
Irving, John, London.
Jackson, Dr. Robert T., Harvard University, Cambridge, Mass., U.S.A.
Levander, Dr. K. M., Helsingfors, Finland.
Longfield, T. H., F.S.A., Museum of Science and Art, Dublin.
Lucas, F. A., Department of Comparative Anatomy, U.S. National Museum.
Mason, Thomas, Free Library, S. Martin's, London, W.C.
Martin, R. F., Victoria and Albert Museum, London.
Mayor of Bradford (Councillor Wm. C. Lupton, J.P.).
Meyer, A. B., M.D., Museum, Dresden.
Monks, F. W., Warrington.
Monckman, Dr. James, Bradford.
Morgan, John, St. Leonards-on-Sea.
Muff, Mrs. M., London.
Naylor, E., Bradford.
Newton, E. T., F.R.S., Geological Survey, London, W.
Newton, R. Bullen, F.G.S., British Museum (Nat. Hist.).
Ogilvie, Professor F. Grant, Museum of Science and Art, Edinburgh.
Pacy, Frank, Library Association.
Parkin, William, Sheffield.
Pawson, T., Bradford.
Penrose, Geo., Museum, Truro.
Petrie, Professor Wm. Flinders, M.A., D.C.L., University College, London.
Phipson, Miss Emma, Reigate.
Plunkett, Count, Dublin.
Reeve, James, Castle Museum, Norwich.
Rudler, F. W., F.G.S., Museum of Practical Geology, London.
Scharff, Dr. R. F., Museum of Science and Art, Dublin.
Sclater, P. L., LL.D., F.R.S., Zoological Society, London.
Skiff, F. J. V., Field Columbian Museum, Chicago, U.S.A.
Smith, Harlan I., American Museum of Natural History.
Smith, G. Jackson, Sheffield.
Sorby, H. C., LL.D., F.R.S., Sheffield.
Stokes, John, M.D., Sheffield.
Swanton, E. W., Museum, Haslemere.

Trail, Professor, University Library, Aberdeen.
Traquair, Dr. R. H., Museum of Science and Art, Edinburgh.
Thering, Dr. F. von, Museo Paulesto Sao Paulo, Brazil.
Turner, Sir William, K.C.B., Edinburgh.
Vallance, D. J., Museum of Science and Art, Edinburgh.
Veitch, W. Y., Museum, Middlesborough.
Webster, W. D., London.
Welch, C., Guildhall Library, London.
West, William, F.L.S., Bradford.
White, Thomas, London.
Wilson, J. E., Bradford.
Woolnough, Frank, Museum, Ipswich.
Woodward, A. Smith, British Museum (Natural History), London.
Woodward, Bernard H., Perth Museum, Western Australia.
Woodward, Dr. Henry, F.R.S., British Museum (Natural History), London.
Woodward, Mrs. Henry, London.
Wray, L., Perak Museum.
Yates, George C., F.S.A., Swinton, Manchester.

MUSEUMS ASSOCIATION.

STATEMENT OF INCOME AND EXPENDITURE FOR THE YEAR ENDING JUNE, 1902.

RECEIPTS.

	£	s.	d.
Balance from previous year	122	14	5
Members' Subscriptions, 1900	1	1	0
,, ,, 1901	55	13	0
Associates' Subscriptions (1897, 10/6; 1898, 10/6; 1899, 10/6; 1900, 10/6 ..	2	2	0
,, ,, 1901	34	2	4
Advertisements	45	13	6
Sale of Reports	14	4	9
,, Journals	13	0	5
Bank Interest	1	19	3
	£290	10	8
Balance brought forward	138	4	0
Members' Subscriptions, 1902	11	11	0
Associates' ,, 1902	7	17	6
Cash in Bank	£157	12	6

Arrears:—	£	s.	d.	
Members' Subscriptions	2	2	0	
Associates' ,, ...	2	2	0	
Advertisements	11	14	0	
				£15 18 0

EXPENDITURE.

	£	s.	d.
Printing and Stationery	3	10	6
Fares of Executive Committee	2	1	8
Expenses of Edinburgh Meeting	6	2	0
Binding Reports	0	17	0
E. Howarth—Postages and Disbursements	9	4	11
Do. Assistance	22	15	0
Printing Journal	96	9	6
Postage of Journal	9	17	1
Cabinet	1	5	0
Banker's Commission	0	4	0
	152	6	8
Balance	138	4	0
	£290	10	8

Examined, 17th July, 1902,

CHARLES MADELEY,
H. M. PLATNAUER,

W. H. BRITTAIN, TREASURER.

The New Museum at the Cartwright Memorial Hall, Bradford.

WHAT SHALL BE ITS CHARACTER AND SCOPE?

By Butler Wood.

IT is not altogether from an unselfish motive that I welcome the presence of the members of the Museums Association in Bradford. In any case the welcome would have been sincere and hearty, but the fact that the members can be of valuable assistance to us at the present juncture has somehow invested it with an additional fervour.

The particular occasion I refer to is the approaching completion of the Cartwright Memorial Hall, the munificent gift of Lord Masham to the city of Bradford. This building, as you are doubtless aware, will consist of an art gallery and museum, and for the first time in its history Bradford will possess a building adequate to its needs in this direction. The present art gallery has been remarkably successful, considering the drawbacks of its situation and limited accommodation; and as it has always been more or less unequal to the work it should perform, the new building will enable the committee to do fuller justice to this department than has been possible in the past. But although Bradford may fairly claim to have done something in fostering a knowledge of art amongst its citizens, it has so far done little or nothing in the direction of museum work. Lord Masham's generosity has, however, made it possible to provide a suitable home for a museum, and as the present library and museum rate will be unequal to the maintenance of the new institution, the city council are about to ask Parliament for power to raise an additional penny in the pound for library, art gallery, and museum purposes, and when this is obtained there will be no difficulty in maintaining these departments in a satisfactory manner.

Having in view the prospect of a suitable building and adequate financial resources to maintain it, I thought the presence of a body of museum managers and directors would be a good opportunity for obtaining some advice on the formation

of a museum (the lines of an art gallery being already settled), and this is my only excuse in writing these notes. I feel sure, however, that you are not unwilling to express your opinions, and that your advice on this question will be freely and fully given.

I will begin by placing before you a statement of the amount of accommodation which will be available for museum purposes, for upon this will depend the nature and extent of the work to be done. The enlarged plan on the wall shows two large rooms, the west one being 88 ft. × 28 ft., and the east room 71 ft. × 28 ft. There are in addition two small rooms, 16 ft. × 15 ft. each. Taking the largest room, I find the wall space measures 151 linear feet; and if cases 8 ft. high be placed along it, the case capacity will equal 1208 square feet. Allowing a projection of 2 ft. for the wall cases, I find that the floor space will accommodate 8 rows of cases 12 ft. long and 5 ft. broad, and this disposition will allow alleys 5 ft. broad between each row, and also a space of 5 ft. at the end of each row. The east room contains 133 linear feet of wall space, against which 1064 square feet of cases can be placed. Six rows of floor cases, similar to the above-mentioned, with same spaces round them, can also be fixed in this room. The two smaller rooms have each 20 ft. of linear wall space, or 160 square feet of case capacity, and the floor accommodation for a case 8 ft. × 4 ft.

The whole case capacity of the museum rooms would consequently be as follows:—

Wall Cases.		
West room	1208	square feet.
East room	1064	,,
Small room No. 1	160	,,
Small room No. 2	160	,,
Total wall space capacity	2592	,,
Floor Cases.		
West room, 8 rows, 60 square feet each	480	,,
East room, 6 rows, 60 square feet each	360	,,
Small room No. 1, floor case, 8 × 4	32	,,
Small room No. 2, floor case, 8 × 4	32	,,
	904	,,

making a total case capacity of 3496 square feet.

It must not be forgotten, however, that many museum objects, elephants for instance, cannot be placed in cases, and would need floor space for their reception; therefore whatever is done in this direction will reduce the case accommodation accordingly. Mr. Edwards, of Worcester, will be interested in learning that the floor area of the Cartwright Memorial Hall is nearly the same as that of his own institution; Bradford having 4692 square feet, and Worcester 4657 square feet. The fact of the same architect designing both buildings may have something to do with this coincidence. It will, therefore, be useful to learn how the Worcester authorities have dealt with the space at their disposal. So much for the question of storage capacity.

The next important point to be considered is the nature of the material within reach of the committee for museum purposes:—

MOLLUSCA.—At the present time we have Dr. Evan's collection of shells, which was formed for the purpose of illustrating Woodwards' "Manual of the Mollusca," and this will be supplemented by a series of British land and fresh-water shells collected by Mr. Rhodes, a member of the museum staff.

ENTOMOLOGY.—A fine entomological collection formed by Mr. Varley, a noted Huddersfield collector, has recently been presented to the committee for the new museum, where it will serve as a good nucleus for this branch of museum work.

GEOLOGY.—In this department we can place a large cabinet presented by Mrs. McLandsborough, containing an admirable sequence of fossils from the Cambrian series to recent deposits. The committee also hope to persuade the Bradford Philosophical Society to hand over their extensive geological collection, which will make a most valuable addition to this section.

BOTANY.—A number of Bradford botanists have intimated their willingness to assist in forming a herbarium which shall have special reference to the needs of local students. As a herbarium will not occupy a large amount of space, there should be no difficulty in finding the accommodation required for this purpose.

ANTIQUITIES.—In the domain of antiquities the objects available are not numerous. Mr. Wm. Cudworth's valuable collection of pre-historic objects will be at our disposal; but beyond this, and a collection of Greek pottery presented by Mrs. Knowles, there is little else in this direction.

A small collection of ethnological specimens completes the list of available material for the new museum. From this summary it is obvious that many important divisions of natural history are entirely unrepresented; notably fishes, birds, mammals, and also the lower forms of animal life.

Having placed before you the amount of space available for museum purposes, and indicated the nature of the material at the service of the committee, I now put before you the all-important question—"What shall be the character of its contents?" The late Mr. Brown Goode, of the Smithsonian Institution, in his article on Museum administration, lays stress on the necessity of determining the character of a museum at its very inception, and I feel sure you will agree with this principle.

We find museums devoted to art, history, technology, natural history, anthropology, antiquities, and many other branches of knowledge, and in many cases modifications and specializations of these subjects. It is, therefore, somewhat difficult to arrive at a wise decision as to the plan and scope of the work upon which we shall soon enter.

I may say this much with reference to our own position that the idea of a museum of natural history and antiquities has been suggested, but no attempt has been made to ascertain the practicability of such a scheme. At the same time I confess myself doubtful as to whether it will be possible, with the space at our disposal, to carry out effectively, a scheme for providing an antiquarian as well as a natural history museum, and I say this in the face of my own predilection for the former subject. The character of the material already in our hands evidently fostered this idea, which, if practicable, would, no doubt, meet with the approval of the majority of the citizens. I should like to anticipate at this point a question which might be reasonably asked, namely, "Why is there no suggestion of a technological museum, where the local textile

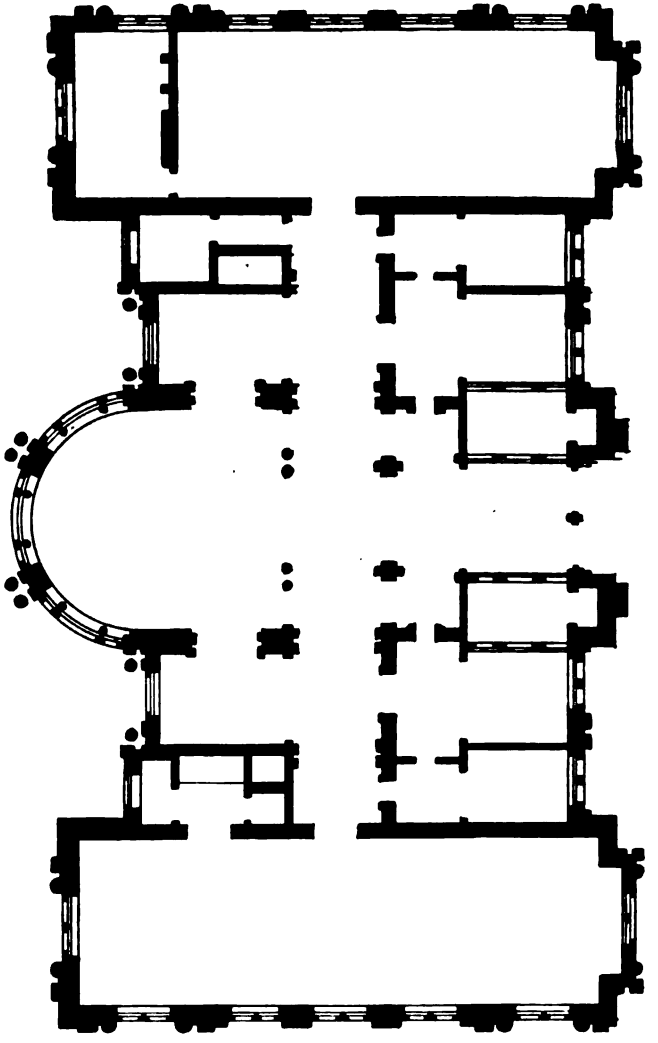
industries might be illustrated?" This important question has not been overlooked, but the proper home for such a collection is undoubtedly the Technical College, where such an important aid to study would be of the highest value to the students, and where it would still be accessible to the general public.

Assuming, then, that a museum of natural history and antiquities is desirable, and having in view the space available, the question arises as to whether it will be advisable in the case of natural history to work on the plan of a general summary or abstract of the scheme of Nature, or to confine our efforts to certain well defined divisions such as zoology, botany, geology. Or, to further specialize its direction by making it simply representative of our local natural history. My own feeling is that we shall be wise, if space will allow, in making our scheme as broad as may be consistent with efficiency, and in taking the materials already in our possession as starting-points in the development of the departments to which they belong. Museums, like other things, have their beginnings; a start must be made somewhere; and the material at present available, wisely augmented year by year, will, I hope, grow valuable in the same ratio. The problem, in brief, then, is this:—Given a certain amount of accommodation, and a certain amount of material suitable for museum purposes, what particular kind of museum will be likely to prove most useful to the citizens of Bradford?

I have been strongly tempted to touch on the question of museum administration, with a view of raising a discussion on this important point; but I feel that as the exact nature of our future work has still to be determined, it would be somewhat futile to do so on the present occasion.

In conclusion, I would urge the delegates present to favour us with their opinions on the question of "What shall be the character of our new museum?"

CARTWRIGHT MEMORIAL HALL
MUSEUM PLAN.



Mr. W. E. Hoyle said he would take the Bradford Museums Committee at their word, and venture on some criticism. That the building would be a magnificent structure was obvious, and he need not spend time in compliments. But from the point of view of a museum the allotment of space marked out upon the plans exhibited, had several drawbacks. He thought, in the first place, that the amount of space allotted to administrative rooms was very large in proportion to that which was allotted to the exhibition of specimens. Looking at the ground plan, about half of the museum space on the ground floor was occupied by purely administrative offices, and only about half would be available for the exhibition of specimens. And seeing that the real object of a museum was the exhibition of specimens, and that the administrative rooms were subsidiary, this was rather a small proportion, and possibly even yet the architect might find it possible to allow a certain amount of modification. He did not know very much about the atmosphere of Bradford, but at Manchester they found that their windows were not a bit too large, and their museum was constructed with every available inch of wall space made of glass. Looking at the Bradford plans, and remembering that the light is obtained from one side only, he was afraid that it would be found that on the far side of the rooms opposite the windows there was not sufficient light. He presumed that the upper floor, which was to be made into an art gallery, would be lighted from the top. He would like to say a word there as to the question of the curatorship. The chairman had jocularly depreciated Mr. Butler Wood's knowledge of museum matters in inviting the opinions of the other members of that meeting. But Mr. Wood had been a member of that Association from its foundation, and even if he had not attended so many of its meetings as they would have wished, he had undoubtedly read their publications, and he must, therefore, have a very good practical acquaintance with museum work. But even Mr. Butler Wood would be the first to admit that to run large and increasing libraries, and at the same time to run a large museum, was almost beyond the limits of human capacity. He thought, therefore, the Bradford committee would have to consider the question of dividing the two offices. A man could not serve two masters. He was pretty sure that those of his colleagues who had tried to run the two institutions side by side would bear him out in saying that it was an extremely difficult problem, and that to do justice to both in a city like Bradford would really verge upon the impossible. As regarded the exhibition of the natural history specimens, the plan of the galleries had to be considered. On the one side was a blank wall, and on the other

a row of windows. If they were to have wall cases on the blank wall, people who wished to see what was in the cases would be simply blinded by reflections, and would be unable to see anything. They must arrange the cases with regard to the windows, so that people standing in front of them did not get reflections. He thought the space would be much better occupied if cases were obtained to extend across the room, and the wall-space were occupied in the display of diagrams, maps, &c., which could not be displayed anywhere else. As regarded the purpose of the museum, he understood that the idea was that there should not be a technical museum in that building, though some of the rooms, it seemed to him, would be better adapted for that than for a natural history museum; but if Bradford was to have a natural history museum, he ventured to think the proper way to do would be to have a local museum and a general museum. He should arrange these one on either side of the main entrance, and give them about equal space. If they tried to have a general museum and a local museum in one collection, it would be found altogether out of proportion in certain departments, and this would only give the public a wrong impression of nature. For instance, in a small general collection it would not be desirable to include all the British land and water shells. They would not want more than two or three of the English series. But let their local collections be as full as possible, and the specimens be arranged to shew seasonal changes, the different stages of development, and so on, as clearly as possible. With a local collection like this, the general collection could be cut down to type collections to illustrate systematically the whole course of nature. As to a herbarium, his own opinion was that it was out of place in the exhibition galleries. It ought to be placed in a little room where it could be worked at by the student. One could not with any success work at a herbarium in a museum, and it took up the available space that might more profitably be devoted to other things. The question of how much space to give to archæological collections, how much to botanical, how much to geological, and so on, was very difficult to determine, he would not venture to express an exact opinion.

Mr. H. M. PLATNAUER urged the committee not to allow themselves to be too much hampered by what they had already. Never mind what the museum possessed at present. If they had got the wrong thing, that wrong thing must be put aside, and the right thing secured to put in its place. He slightly differed from Mr. Hoyle as to the way the museum should be laid out. He thought the general collection was far the more important. Teaching from a local collection was

like teaching from a text-book from which whole chapters and many pages had been torn. The general collection ought to give as exact a scheme of natural history as was possible. One could not judge the whole realm of nature from that which fell within a municipal borough, or even an area of ten or twelve miles from its boundaries. It was most important that there should be good typical collections arranged on clear lines. Let one of the large galleries be devoted to natural history collections in systematic order. Let the other be devoted to the science of telling a man all the history of his race. Then let the local collections be relegated to one of the small side rooms, which were all too small for their purpose. Local collections of land shells and so on could be placed in this room, with labels which would direct the visitor as to where to find the types in the general collection. It would, perhaps, be as well if a few carefully written out schemes should be forwarded by some of those present. He thought they would be more useful than much discussion in a general way.

Mr. W. H. Edwards (Worcester) said that Mr. Wood had pointed out that the area of the Cartwright Hall would be similar to that of his own building at Worcester. But in many respects they differed very widely. He found that they at Worcester had too many windows, and not too few. Their windows were in one or two instances fixed so as to run the whole side of a room, and the rooms were very small. The up-stairs floor was split up into five galleries, and the result was that they had to place cases round the walls, or there would be no walking space in the rooms, and with all those windows they found the reflections a very great drawback. Added to that was the fact that their cases were glazed with the old-fashioned crown-glass, and that was extremely unsatisfactory. He would suggest that a strong feature should be made of the local collections. He thought all provincial museums should endeavour to do this, even at the expense of having to store away in cabinets the greater portion of the type collections. Looking at the plan of the Cartwright Hall, it appeared to him that there was a great deal of waste space, and he feared it was the same at Worcester. Very much space there, as in Bradford, was taken up by vestibules, stair-cases, and small rooms, sacrificing the useful museum space. He considered that collections of coins and of entomological objects should be placed in small rooms, and should not be allowed to take up space in the general exhibition rooms, as they were only useful to students.

Bailie Bilsland (Glasgow) said that the discussion to which he had listened with interest showed the great usefulness of such conferences, and it was especially fortunate that

the visit to Bradford should have been timed at a moment when the city had a new art gallery and museum in preparation. He could not himself pretend to add anything to the discussion which was of a practical nature. He did not, of course, approach the subject from quite the same point of view as Mr. Platnauer, and looking at it from the committee-man's point of view, he thought the Bradford committee were to be congratulated on having such an excellent nucleus with which to start their museum. He had great sympathy with the idea of making a museum strong in being representative of local history, and well furnished with local objects. He thought that people who were visiting a museum expected to find good local collections. Of museum matters, however, he could say little, and he would rather proffer a few words of advice in regard to the art gallery section. In connection with the art gallery in Glasgow, they frequently had loan exhibitions. These might not be large, but they covered from time to time all the various sections and phases of pictorial art, and the objects shown were the best that could be obtained. He would not have the committee aim at very large exhibitions. It was far better to have them small and good. In Glasgow, they had also found great benefit in having frequent exhibitions of arts and crafts, and of articles in which art was applied—leather-work, metal-work, bronze, silver, and wood-work—and various exhibitions of that kind. In Glasgow, also, they had in recent years given prizes for such articles, and had invited competition from all parts of the kingdom; and these exhibitions had had a most stimulating effect upon the local craftsmen in various lines, and put them upon their mettle to retain the prizes in Glasgow. They had not always done so by any means. There was another feature which had been developed with great success under the care of Mr. Paton, and that was a system of lectures in the winter. This branch had been developed along two lines—lectures had been given on some of the pictures in the galleries, and this had developed into different branches, sometimes the work of a special artist was dealt with, sometimes the work of a school or a nation. These lectures were very much appreciated and well attended. All this involved a great deal of work, but they were managed exceedingly well and, of course, there were public-spirited gentlemen in Glasgow quite capable of assisting in these lectures, many of whom were connected with the University. These gentlemen had taken the matter in hand with vigour so that its development had been most gratifying.

Dr. H. O. FORBES (Liverpool) said he agreed with most of Mr. Hoyle's observations, and especially with his view of the absolute necessity of local collections. Except, perhaps,

in the case of very large metropolitan museums, every visitor to a museum expected to find the locality well illustrated, and everyone commencing a study would go there to see what the locality produced. As regarded wall-cases, he had come to the conclusion, from an experience of several years, and in dealing with an extension, that the best way was to have no no wall-cases at all. People must walk somewhere, and they might as well walk against the wall as in the middle of the floor; and when there were no wall-cases there could be hung on the wall all sorts of diagrams which could be placed nowhere else, and these diagrams were often necessary to understand the collections. In regard to cases, nothing above seven-and-a-half feet in height was of any use, for an object exhibited higher than that could not be properly seen. The cases which he had were of glass on all four sides, 7½ feet high by 8½ feet. How long depended upon the capacity of the gallery. He had a case 5 feet in depth, divided in the middle with a screen of ground glass, which was very convenient. As regarded the herbarium, he had found that a large number of botanical specimens could be dried to look as if they were freshly collected, and in this form plants might very properly be included in the exhibition galleries. He had had specimens submitted in that form, he believed from York, which absolutely looked as if perfectly newly collected, with the colours all retained, and the plants only wanted properly fixing to look like fresh plants.

Mr. D. J. VALLANCE (Edinburgh) said that looking at the plans, and allowing his imagination to picture the place when it was complete and well filled, it seemed to him a great pity that the upper part of the building should be devoted to a picture gallery, when it might have been devoted to the exhibition of scientific collections. But if that was to be a picture gallery, and he understood that was settled, did it not strike the key-note of what the whole arrangement should be? He did not like the incongruities of a mixed museum. He spoke from his experience in Edinburgh, where already the natural history collections were walking into the tapestries, and getting mixed up with the armour, and the natural history collections were becoming so overlapped with the art collections, that elephants and sixteenth century tapestries were intermingled, and the two things did not go well together. In such a grand building as the Cartwright Hall, there was an opportunity for making something unique in the way of a museum; and he appealed, therefore, to them to bear in mind at every step the ultimate appearance of the museum when filled. If there was to be an art collection on the upper floor, that left a very small part of the building for

museum collections. He did not think it was realized how small it was in relation to the project they were undertaking of establishing a general natural history collection. He thought that in any case, if a natural history museum were established, it was of the greatest importance to find out how far and how much could be done with type collections. Would it not be better, seeing that the upper storey of the building was to be given to the highest efforts of man in the realm of art, to so plan the whole museum as to lead up to that development. It was open to the museum to develop into an institution with a character of its own, which should make it honoured, or it might become a general muddle. He thought, therefore, that it would be well to have some key in guiding their action. Why not let the Bradford committee try to establish a museum which should illustrate from the earliest times to the latest the development of man's civilization. They could get reproductions of articles of human manufacture which would take the history of the race back, some said three hundred thousand years; and with a series of exhibits they could go through palæolithic and neolithic times, and coming down through a general ethnological collection, which would illustrate the great difference between civilized and uncivilized conditions, and illustrate the rise of men from the lowest manifestations of intelligence, through the intermediate stages represented by the iron-using people of the Congo.

Mr. J. MORGAN (Worthing) said that being neither a man of science nor a curator he had little right to intervene in the discussion, but it so happened that some experience which he had not very long ago, had given him deep sympathy with Mr. Butler Wood in his present position. He, with others, had been concerned in the reconstituting of the museum at Hastings and they had tried to arrange their collections with some continuity beginning with the lowest forms of animal life and going on to the highest. Then they passed to geology and then to archæology and thence they passed to ethnology. From the old the collection went on to the more recent works of human skill in handiwork and from that they passed to the highest works of art so far as they could show them. He could not too much impress upon the friends in Bradford the necessity of never losing sight of what was to be the grand object of the museum. It was to instruct, and more than that, it was to lift and inspire, and to make our fellow creatures realize how much of beauty was in nature.

DR. BATHER (Natural History Department of the British Museum) said that he supposed they had to accept the fact that there must be in this museum a geological collection, a conchological collection, and an entomological collection, and

that being so the museum was marked out for a natural history museum. The space was certainly meagre for museum exhibits, but they could manage to make in a comparatively small space a fairly good museum. The great want of all curators was ample room for working in, and carrying out the general and proper business of the museum, and also room for storing specimens. In a museum of this character it was possible to keep it a great deal more interesting if there was constantly a certain amount of change. He did not believe much in large exhibited series in a place of that sort, and he believed that small special exhibitions would interest people very much more, and it was quite possible to make this change. The specimens could be got ready and arranged on trays in the work-room and quickly removed to their places. In this way the museum could be made very interesting and a large amount of space could be saved. There ought to be general collections. It was quite necessary that there should be general collections as well as the local collections, but these general collections could be kept very small. An elephant was not really necessary. It took up far too much room. It was popular, no doubt, but it was far more popular when it was alive than when stuffed. It had been suggested that the local collections should be placed on one side of the hall and the general collections on the other. Would it not be sufficient, and better understood, if the local collections were split up into sections, which sections were placed close to their proper place in the general collection. In that way one side of the hall might be devoted to geology and the other to zoology, and the local fossils might be placed near the general collection illustrative of their type. It would not be necessary to duplicate much, and cross-references could be given to the local objects pointing out exactly their place in the general collection, and this could be made much more clear and useful than if the general and the local exhibits were in different parts of the building. This was a suggestion which might be worth considering, and though there might be practical difficulties in working it out, those difficulties were worth surmounting. If lectures were given in the museum, there ought to be a lecture-hall. He did not know whether the apse-ended hall was intended for this purpose, it might be possible to arrange for them in such a hall. It was not easy to conduct lectures in public galleries where it was exceedingly difficult for the speaker to make himself heard, where the cases came in the way and where people could not see.

Mr. E. HOWARTH (Sheffield) said that some of the speakers had been wandering a good deal from the point, which was the nature and scope of the museum in Bradford. They did

not want a young British Museum in Bradford, and in their talk about local collections nearly every speaker overlooked the fact that there was another—and from the local point of view equally important side—the side which illustrated the history of the locality itself. He would suggest that all possible pains should be taken to gather together everything which related to the past history of Bradford, whether the exhibits illustrated the architecture of old Bradford, or its want of architectural features, or whether it shewed how the domestic life had followed one step after another in a certain line, or whether they illustrated the manufacturing methods of Bradford in the past times, or whether they shewed the evolution of the different branches of machinery. The city would then have, in its museum, a tangible and very interesting epitome of its past history. In regard to a herbarium, he recommended illustrations of the plants of the district. This idea was carried out at Kew on a large scale. The herbarium of dried plants could be kept in cabinets, and need not occupy much room. In regard to staff, the Bradford museums committee would have to remember that a large hall meant increased staff. They could not put upon the shoulders of the same staff six times as much work as they had before, and expect them to do it efficiently. It was just as desirable that there should be a commensurate staff for the working of the museum as that there should be good exhibits. When one considered the range of knowledge covered in a general museum, it must be evident that unless the museum had someone to carry out sectional work, that work could not be done well, and it was of the utmost importance that it should be done well, and that the museum should become a standard of reliable reference. It was, however, rather difficult to get an honorary staff to assist in museum work, unles the city had a university college.

MR. CHARLES MADELEY would venture to suggest that too much allowance had been left for rooms to be devoted to art in proportion to the space alloted to the scientific collections. In regard to local collections the meeting had had three methods of dealing with them recommended, and there were other methods. He would only suggest that the question of local collections was largely a question of geographical position. Local collections were naturally a very desirable thing to make, if they could be made interesting, but in the case of their museum, they were situated in a district so free from natural features that any attempt to teach natural history from what they could show locally would be very much like attempting to teach English literature solely from the books written in the Lancashire dialect.

Dr. J. MONCKMAN (Bradford) said the discussion had been about museum matters in general, but very little about a museum for Bradford and Bradford people. It was one thing to fill the museum, but quite another thing to make its contents interest and appeal to the people who ought to visit it. However much or however little there was in the museum, the habits, knowledge, and feelings of the people of the city must be consulted. And this point of view had, he thought, been a little neglected except by one speaker. It was no use to Bradford to set up a British Museum in Lister Park. As well as good advice as to the initial arrangements as to scope and purpose, they would want someone to assist in the arrangement of the specimens, and other scientific details, and these assistants, he ventured with all deference to say, would not be found in the council itself.

MR. JAS. PATON (Glasgow) said there was nothing more pleasing to mortals than giving advice. It was cheap and there was a great deal of it. It did not do any harm because it was never taken unless it was what was wanted, and it was seldom asked unless people were pretty sure of getting that which they wanted. He had the greatest respect for the naturalist, technologist and for the artist, but he thought Mr. Howarth touched a most important point when he said, "Whatever you do, look after Bradford." There was nothing more interesting to Bradford people than their own town. An exhibition of stuffed animals did not add very greatly to a knowledge of natural history, but an exhibition of articles and relics connected with old Bradford was of interest to everyone who had the slightest local patriotism. There were many things in general use only a few years ago which had almost disappeared, but which if brought together would be of great interest. Many of these, though familiar enough a little while ago, were very difficult enough to find now. If he could bring the Bradford Committee to realize adequately the importance of illustrating the history of their own town his intervention in the debate would not have been in vain.

MR. BUTLER WOOD said he could not pretend to reply to all the suggestions in detail which had been made and which would be most gratefully received. He had been trying to get at the scheme which best represented the general sense of the meeting. So far as he could make out the balance of opinion seemed to be in favour of the establishment of a natural history museum, with provision of a department for a special local collection, as well as the general type collection. He thanked the members of the Association for their assistance, for he had little doubt that the policy of the committee would be guided by that morning's discussion. The

upper rooms were entirely devoted to the purposes of the exhibition of works of art. But it was the intention to use the building for city functions. Such a place was needed in the city, and if the Mayor, for the time being, wished to hold a reception he would be in a position to use the rooms, and slight modifications had been made in the plans to render them available for the purpose, but these modifications would in no way interfere with their use for the purposes of the exhibition of pictures.

The CHAIRMAN of the ART GALLERIES COMMITTEE (Alderman Toothill) said that his committee would consider the many valuable suggestions which had been made. It had to be remembered that the new hall had to play a great many parts. It was established to the memory of Dr. Cartwright, and it would stand also, he was sure, to the memory of Lord Masham. It was also an art gallery, because it had been felt that Bradford needed an art gallery very badly.

General Notes.

AT HOME.

NATURE STUDY EXHIBITION.—This exhibition, the first of its kind, held in London was open from July 23 to August 5, in the Royal Botanic Gardens, Regent's Park. It has proved a great success, and has attracted quite a galaxy of distinguished persons connected with education from the Lord President himself to the 3rd standard boy and girl from Ratcliff Highway. Schools and colleges alike, of all grades throughout the country have responded well to the call of the indefatigable secretary, Mr. J. C. Medd, and in consequence it has been possible at this exhibition to study and compare the nature work in primary and secondary schools and in teachers' training and agricultural colleges. The museums were not largely represented, but it is to be hoped they will do more when this exhibition is repeated, as we feel sure it will be. The museums contributing to the recent exhibition were the Cardiff Museum and Art Gallery; the Manchester Museum, Owens College; the Art Museum, Ancoats Hall, Manchester; the Stepney Borough Museum; the Perth Museum; and the American Museum of Natural History, New York. Thirteen medals were given, one of which the judges awarded to the Stepney Borough Museum for its efforts to assist the nature teaching of East London elementary schools, and another to Prof. Bickmore of the American Museum of Natural History, who brought with him several series of most beautiful lantern slides illustrating typical scenes and subjects in various countries, which he used with considerable effect at his lectures on "Visual Instruction." The exhibits from Eton College Museum, illustrating the method of preserving the local flora and fauna and some preparations from the type collection, together with the interior of the museum proved a most interesting and profitable source of study to all curators. Sexey's Trade School Museum, Bruton, Somerset, should be worthy of inspection from the plan of it sent in for exhibition. Conferences were held on five afternoons, when addresees were given by the Lord Avebury, D.C.L., F.R.S.; Prof. Lloyd Morgan, F.R.S.; Prof. Bickmore, New York; Prof. Miall, F.R.S.; and the Rev. Canon Steward, principal, the Training College, Salisbury. Educational publishers and appliance makers greatly added to the interest and usefulness of the exhibition, especially Messrs. James Lee and Son, who sent a six-frame observatory hive with living bees, and Messrs. Gunn and Co., who showed a library of most attractive and suggestive books on nature study.

PUBLIC RECORD OFFICE MUSEUM.—A private view of the new museum of the Public Record Office, Chancery Lane, was given in June by Sir Henry Maxwell Lyte, Deputy-Keeper ot the Public Records, who has lately arranged and catalogued the treasures—historical, literary, and artistic—which are contained within its walls. The museum is built on the site, and very much on the lines, of the old Rolls Chapel, but in its present form more nearly resembles a college hall, though the presence in it of a number of tombs of former Masters of the Rolls who are buried in the vaults below, and of a quantity of fine old stained glass, preserves much of its ecclesiastical character. It is not as yet open to the public, nor is it quite complete, but the treasures, beginning with Domesday Book, and ending with the Coronation Roll of Queen Victoria, embrace a wide range of subjects. The present head of the office, Sir H. Henn Collins, Master of the Rolls, and Lady Henn Collins, inspected the monuments and the contents of the glass cases with great care, and no less interest was shown by Lord Lindley, a former Master of the Rolls, who was also among the large company present.

THE SILCHESTER EXCAVATIONS.—At the rooms of the Society of Antiquaries, Burlington House, an exhibition has been held of the objects found during the excavations at Silchester in 1901. The work of the year was confined to the northern half of the town, and extended from the modern road to the old town wall. In the southern part of the ground opened a large square block (technically, an insula) was uncovered, and north of this was an extension of a block of which the larger portion had been excavated two years before. In the southern block the foundations of three houses were met with, and of these two were of more than ordinary interest in that they shewed additions to the original buildings. The northern house, originally of the courtyard type, was nearly doubled in size by the additions, and had evidently belonged to a man of some wealth, for it had mosaic pavements in most of the rooms, and of these two have been sent to London for exhibition. One is of a very unusual shape, nearly circular, part of the circle being cut off by a rectangular piece, ten feet long. The centre is destroyed, but round the inner portion is a wide border of Greek fret in drab tesseræ on a white ground, and beyond this runs a braidwork pattern in colours. The other piece of mosaic is a fragment; the border contains a bust which may represent summer, as it was a common practice to figure the seasons at the corners. Pieces of wall-plaster shewed that the rooms were decorated, and the colours are still bright. The house was half timbered, with clay filling; and to elucidate this method of building, photographs are

shewn of cottages on the same plan which are falling into decay in a neighbouring village. Clay-filling from the Roman houses, with a decorative pattern on the outside, and casts of the lathing and wattle-work on the inner side have been placed for comparison side by side, with similar material from the modern cottages, and the resemblance, in all but the decoration, is exact. The second house was of a similar type, probably belonging to a man in less comfortable circumstances than the occupant of the northern house, for the floors were of coarse red tesseræ without any mosaic. To this, winter rooms, warmed by hypocausts, had been added. The third house, of the corridor type, was of little interest. Some stone finials were discovered, and a sculptured stone from the head of a niche, bearing a human figure. Fewer wells and pits were discovered than in previous years, but some of the objects recovered were valuable. A pair of iron tyres for cart-wheels were the first met with in this country. They are of large size, 43 inches in diameter, and must have been shrunk on, for there is no trace of nail-holes. A box-tile, with the inscription, "*fecit tubu|m| Clementinus*" (Clementinus made this pipe), is of considerable interest as affording incontrovertible evidence that Latin was familiar to the working classes of Calleva, and that some, at least, were very fair scribes, for the letters are well formed and flowing. The pottery differed but little from the ordinary finds; there was, however, a good pot of Caistor ware, ornamented with a light-coloured trailing pattern and figure of a cock on a dark ground. A fragment of glass shewed etchings of a fish and palm branches, with what looks like traces of a letter; and a spoon with a pointed end deserves notice, as it served a double purpose, the bowl being used in ordinary fashion, and the sharp handle for eating snails or periwinkles. The tools were of the usual character, as were, with one exception, the organic remains. It is suggested that some of the bird bones are those of the pheasant. If this can be substantiated, the view generally held that the species was introduced by the Romans will pass from the region of hypothesis to that of established fact.

PHOTOGRAPHIC EXHIBITION.—Salford has followed the example of Warrington, by organising at Peel Park an exhibition of photographs, of which a very good illustrated catalogue has been published. The most interesting and appropriate museum display is to be found in the first part of the exhibition, showing the early photographic processes. Many of the other photographs are by professional photographers who offer them for sale, and it is also rather curious to note that amongst the exhibits by members of the Manchester Amateur Photographic Society there are several

photographs with prices attached to them. It would be interesting to know what are the commercial results of this attempt at 'shop' in a museum, and also what is the difference between an amateur and professional photographer. There is also a good photographic section in the Cork Exhibition, no prices, however, being given in the catalogue.

THE OKAPI.—The last scientific meeting of the session of the Zoological Society was of unusual interest. Dr. Forsyth-Major announced that his recent journey to Brussels on behalf of the British Museum had resulted in the Congo State authorities allowing him to bring back to London the specimen of the Okapi which had just reached Brussels from the Congo forest. The specimen, the skull of which was shewn to the zoologists, is the second one known of this remarkable quadruped, and is that of an adult animal, while the original specimen, discovered by Sir Harry Johnston, and now in the Natural History Museum, is a young female. Dr. Major inclines to the view that the Okapi is far from being a degenerate form of giraffe, and believes it to belong to a distinct family midway between the extinct *Samotherium* of the Siwalik Hills of India and Samos and the living giraffe. It was stated by Dr. Boulenger that a report has been received in Brussels that specimens of Okapi have been found in the Mangbattu forest, north-west of Lake Albert, and, if this is indeed the case, it shews that the creature has a wide geographical distribution in Africa, making it difficult to understand how it has so long escaped detection.

MUSEUM ROBBERY, BELFAST.—It is satisfactory to know that all the objects stolen from the collection lent by the Victoria and Albert Museum to Belfast have been recovered, and that the thief has been captured. It seems he was formerly an official of the Belfast Museum, and had been carrying on his dishonest practices for a considerable time, in such a manner as to make it very remarkable that his operations were not earlier discovered. This robbery in a special manner justifies the Board of Education in insisting that all institutions to which loans are sent should be properly patrolled and supervised, for if that had been done at Belfast the robbery could not have taken place. It is no uncommon occurrence for a visitor to be able to walk about in some of our museums without meeting an official, or coming across any other visitors; and the safest way of protecting such places is not to rely on locks and doors, but to arrange for constant overlooking by a responsible attendant, while the curator should always be careful to see that the cases and their contents are intact every day.

BRITISH MUSEUM.—The late Lord Cheylesmore, whose death occurred in July, has bequeathed his famous collection of mezzotints to the nation. He was an enthusiastic collector long before the mezzotint came into fashion again, and became the plaything of the millionaires, who will pay £1,200 for a single print after Reynolds. Thus he was able to form an extremely large and complete collection, numbering, it is said, nearly fourteen thousand prints, and including fine examples of all the masters of this fascinating and peculiarly English branch of art, from Prince Rupert in the seventeenth century to John Raphael Smith and Valentine Green in the eighteenth, and Samuel Cousins and David Lucas, who worked for Lawrence and Constable, in the first half of the last century. He contributed so willingly to the loan exhibitions held of late years that his treasures were well known to connoisseurs, and would have commanded fabulous prices in the auction room. But, with the pride of a true collector, he preferred to leave his collection intact to the British Museum, where it will always be accessible to the humblest student.

COINS CLAIMED BY THE CROWN.—An interesting episode took place at Colchester, where an inquest was held last month on some 10,000 silver coins which were dug up during the rebuilding of the London and County Bank. It is the duty of the finder of any treasure trove to report to the coroner, who, by an old statue of Edward I., is directed "to enquire of the treasure that is found who the finders were, and likewise who is suspected thereof." The coins were heaped upon a table in front of the jury, who, after an hour's enquiry, found they were treasure trove, and asked the coroner to make representations to the Crown on behalf of the local museum. The coins were then claimed by the police on behalf of the Crown.

BEQUEST TO THE CITY ART GALLERY, LONDON.—Mr. A. G. Temple, director of the Corporation Art Gallery, has furnished to *The Times* some particulars of the interesting and important bequest which has been made under the will of the late Mr. Charles Gassiott. Mr. Gassiot, of Elmwood House, Upper Tooting, died on May 16, at the age of 76 years. He was head of the firm of Martinez, Gassiot, and Co., of Mark Lane, the well known wine merchants, and for years past he had been devoting a large portion of his ample means to forming a fine gallery of pictures of the English school. After long deliberation, not unaided by the persuasive arguments of Mr. Temple, he decided to leave the whole of his collection to the Corporation Art Gallery, with the exception of four pictures, which are to go to the National Gallery. These four are "The Prison Window" and "Gossips at a Well" John Phillip, a picture by William Collins, and a picture by Patrick Nasmyth, the last two to be chosen by the

National Gallery authorities at their pleasure. Of the pictures which are to go to the Guildhall, the most important is the noble "impressionist" landscape of Constable, known as "Fording the River: Showery Weather." This was purchased privately from the executors of the late James Price, and was exhibited among Messrs. Agnew's "Twenty Masterpieces" two or three winters ago: it is understood that Mr. Gassiot more than once refused an offer of £10,000 for this picture. Next in importance come the four works of Nasmyth, which are comparatively large works of the master, and all of the highest quality; the seven pictures by Collins, including "Barmouth Sands" and "Sunday Morning"; seven works by Clarkson Stanfield; seven by John Phillip, including the celebrated picture, "A Chat round the Brasero"; and W. J. Müller's "On the Medway" and "Gillingham." Among works by masters of the last generation, who are just not now so greatly in vogue, are several by Thomas Faed, two admirable works by William Dyce, two by Landseer, and four by Creswick. The collection also includes "My First Sermon" and "My Second Sermon," by Millais, five capital examples of Mr. Hook, Mr. Briton Rivière's "The King Drinks," and "Pyrrhic Dance" and another early picture by Sir Lawrence Alma Tadema. It is calculated that the whole collection represents a present value of about £60,000. The difficulty of the corporation will be to find room for it in their existing galleries, and the problem of more space will become acute. We imagine that many members will regret the short-sighted policy which led the Common Council to alienate the fine site upon the Embankment, a portion of which would have provided an ideal site for an art gallery.

WHITECHAPEL ART GALLERY.—A Japanese Exhibition has been opened at the Whitechapel Art Gallery. It includes bronzes, carvings, enamels, ceramics, books, lacquer-work, musical instruments, paintings, and prints.

NEW MUSEUM FOR BOLTON.—The Hall-i'-th'-Wood, the interesting old mansion lately restored at Tonge, within the borough of Bolton, was opened on July 23rd by the donor (Mr. W. H. Lever) and dedicated to the public. The hall partly belongs to the fifteenth century and other parts to the seventeenth. It has become more noteworthy in the annals of Bolton and in the narrative of the rise of the cotton industry by the fact that in the eighteenth century, when it had been sub-divided and let in small tenements, it became the home of Samuel Crompton, who there invented the spinning-mule. Henceforward, in the character of a technological museum, it will serve to perpetuate the fame of a fellow-townsman of whom Bolton is very proud. Lancashire manufacturers, the authorities at South Kensington, and

descendants and friends of Crompton, have freely contributed to the illustrations of cotton manufacture and the collection of personal relics. One of the rooms contains an interesting display of local textiles. Another has been furnished and decorated by Mr. Lever for the purpose of shewing what was the character of the interior of the hall in the sixteenth and seventeenth centuries. The chamber which is known as "Crompton's room," and in which he built his first "mule," is stored with personal relics of the inventor. In one corner stands the organ which he built—for Crompton was a musician—and close by are two of his books of music. Here also may be seen his easy chair and book-rest, the family Bible, distaff, walking-stick, tobacco-box, and Crompton's silver watch. The latter is lent by a granddaughter, who bequeathed to the corporation the family portrait of Crompton, painted by Allingham; and another exhibit is a portrait of the inventor's mother, lent by her great-granddaughter. In this room also are pictures of the birthplace of Crompton, and of the house in King Street, Bolton, where he died.

MANCHESTER CITY ART GALLERY.—Institutions maintained by the ratepayers for the public use should be made readily accessible, and the wisdom of abolishing paltry charges for admission was shown in a very striking manner at Manchester recently. The experiment of admitting the public free of charge to the Spring Water-colour Exhibition at the Art Gallery has proved eminently successful. It was reported to the art gallery committee that during seven weeks 29,580 persons had visited the exhibition, as compared with only 1,625 during the corresponding period last year, when a charge of sixpence was made for admission. In whit-week alone there were 9,749 visitors, against 261 in whit-week 1901. The loss of the amount realised by the charge for admission has been almost compensated for by the increased number of catalogues sold. This year 2,820 catalogues have been disposed of at threepence each, while last year only 670 were sold. It was also reported that the number of visitors to the permanent collection this season shows a steady and satisfactory increase. In the past 36 weeks 202,958 persons passed through the turnstiles, as compared with 164,430 in the corresponding period twelve months ago. On Sundays there have been 6,666 admissions, against 5,869; and in whit-week there were 13,386, against 9,582. The committee considered the question of abolishing the charge of one penny which is still made for umbrellas deposited with the attendant at the gallery. This charge has now been abandoned at almost all the principal art galleries in the country, and the committee decided to recommend the city council to adopt a similar course.

ABROAD.

LOUVRE MUSEUM, PARIS.—M. Vandent, grandson of Diderot, has just given six interesting pictures to the Louvre. These consist of two paintings on wood, dating from the Fifteenth Century, supposed to be the work of Pierre di Cosimona, two portraits of men, one by Giovanni Bellini, the other by Antonino del Messino, a "Holy Family," by Bronzino, and a picture by Drost, a pupil of Rembrandt, representing a woman who must have sat for the master's "Bathsheba," in the Lacaze collection.

CLUNY MUSEUM, PARIS.—The Musée de Cluny has been enriched with two valuable gifts. One is a fine specimen of the French woodcarving of the Fifteenth Century, and represents a *bourgeois* of the period. A toque covers his long hair, his beard is black, and he wears a large mantle which falls in harmonious folds and on which are traces of coloured ornament. The second donation is from an Englishman, Mr. George Donaldson, who was vice-president of the furniture section of the Paris Exhibition. It is an extremely rare carved wood table of the first half Sixteenth Century, and is the replica of one in the possession of the Cluny Museum. Very soon also will be added the splendid gift of tapestry, furniture, plates, and manuscripts of the Fifteenth and Sixteenth Centuries, the bequest of M. Rochard.

PARIS MUSEUM OF NATURAL HISTORY.—It is announced that Mr. Pierpont Morgan has purchased for the mineralogical department of the Paris Museum of Natural History the valuable collection of precious stones of America formed by M. Kunz, of New York, for the Buffalo Exhibition of 1901. The stones, which are cut, are accompanied by splendid specimens of crystallised minerals, all taken from American rockbeds. The collection will, it is expected, be open to public view at the Natural History Museum in a few weeks' time.

DUSSELDORF EXHIBITION.—Although this exhibition is primarily devoted to the industrial products and resources of Westphalia and Rhineland, there is a very important art section placed in an Art Palace, which will remain as a permanent monument when the rest of the buildings have been cleared away. It is a charming building in itself, with its entrance on the west front leading through the cupola hall or forecourt into a well proportioned garden-court, laid out at present in the fashion of a Roman garden. Several fine works of statuary are arranged round this court, which opens in ten places into the wings and the front and back. At the back is a third hall, in which the chief features just now are the huge canvas of Fritz Grotemeyer, of Berlin, representing the Peace

Conference in the Council Chamber at Münster in 1648; a portrait of the Crown Prince, the patron of the exhibition, by Professor Roeber, of Düsseldorf. the president of the art section; and a series of mural paintings, with sketches and studies, by Peter Janssen, of Düsseldorf, designed for the aula of Marburg University. The scenes are selected from Westphalian History. Right and left of this series of three halls, with its imposing architecture, run the galleries and show-rooms, and there is a second storey over the front wing on the ground floor. The right wing of the building is almost wholly given over to the Düsseldorf schools of art, while the exhibits in the left wing include Vienna, Frankfort, Berlin, Munich, and the historical art section.

PERTH MUSEUM, AUSTRALIA.—We have become so accustomed in the mother country to regard our colonies as specially advanced in their ideas, that it comes almost as a shock when a man holding a prominent position takes up an attitude that belongs rather to the lands where civilisation is unknown than to the great federation of Australia. But there are cases of reversion and degeneration, and that thriving town of Perth in Western Australia is evidently suffering from one of these —happily a unique example. When the Prince of Wales was in Perth, he laid the foundation stone of a much-needed extension of the museum and art gallery, under a distinct promise that the work should be proceeded with. As it has not been carried out, the Minister of Education was approached, and the result of this interview is pithily stated in the following extract from an Australian paper. A full account of the interview was given in the same paper, and it reads like a chapter out of the dark ages, and is interesting as recording a very curious survival in mental attitude:—

"Mr. Illingworth, as Minister for Education, excels himself. A Minister for Education who regards a public library as a luxury and a museum as a toy must be without parallel in any British community. It is not necessary to deal at any great length with the merits of the request made by the deputation which waited upon Mr. Illingworth on behalf of the Public Library, Museum, and Art Gallery. They asked for nothing more than the fulfilment of a promise, but they found it necessary to remind the Minister that they performed their duties gratuitously and for the benefit of the public before they could obtain even a courteous hearing of their case. It will be remembered that when the Duke of York was here last year he was prevailed upon to lay the foundation-stone of the new wing of the Public Library, having been first assured by Sir Arthur Lawley that it was intended to proceed with the erection of the building. Money for the purpose had been promised by the Throssell Government, and the Leake Government had had plans prepared for the work, so that the deputation may reasonably have felt some little confidence in approaching the Minister. They were able to shew that the additional space was urgently needed—that for the lack of it many books for the library, pictures for the gallery, and collections for the

museum had to be stored away in the basement. The medical men who accompanied the deputation also pointed out that the reading-room was frequently crowded to such an extent as to be prejudicial to health. In addition to having a good case, the deputation were strengthened by the inclusion among their numbers of a Minister of the Crown, and in the circumstances they may well have felt assured of a sympathetic hearing. Instead of receiving this, however, the speakers were subjected to rude interruptions by the Minister, and generally they were treated as though they were trying to get something out of the public Treasury for their own personal advantage. The question of whether the condition of the State finances justified the granting of the request fades into insignificance beside the extraordinary stand taken up by the Minister for Education, and the peculiar views he announced as to the educational value of libraries, art galleries, and the like. Apparently Mr. Illingworth looks upon a public library merely as a counter-attraction to the hotels. In so far as it is likely to assist the temperance cause it has his sympathy, but beyond that he considers it a luxury and a toy. Strangers in the city, and even local residents, find considerable difficulty in profitably employing their hours of leisure and it is safe to say that there is not a city in Australia where a thoroughly equipped public reading-room is more urgently required than in Perth. Mr. Illingworth's open hostility to institutions of this character is not likely to be overlooked when Parliament meets. It quite unfits him for the office of Minister for Education, and furnishes another argument in favour of a change in the Government. It has often been said that a city and its people are judged in a great measure by the standards they set up in their libraries, art galleries, and museums; and it will not reflect to the credit of Western Australia that her capital is deficient in these requirements, and that her Minister for Education regards them as needless luxuries and toys."

Correspondence.

18, The Steyne, Worthing,
August 9th, 1902.

To the Editor of *Museums Journal*.

WORTHING MUSEUM.

Dear Sir,—Will you kindly correct the statement in your last month's issue as to my work at this Museum. I am simply assisting Dr Nicholls, the Curator, by arranging the corals and shells.

Yours truly,
JOHN MORGAN.

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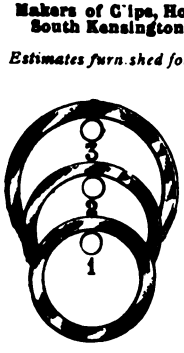

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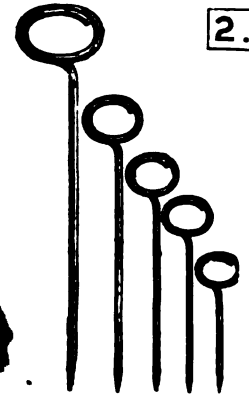

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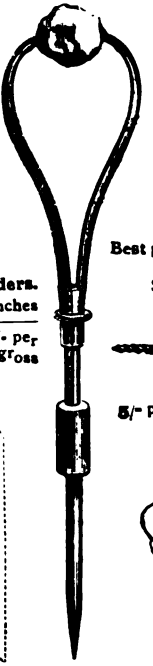

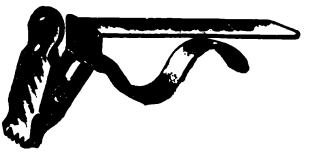

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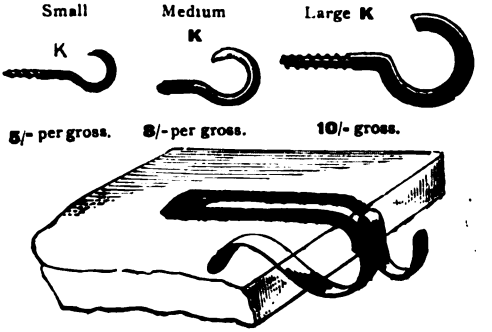

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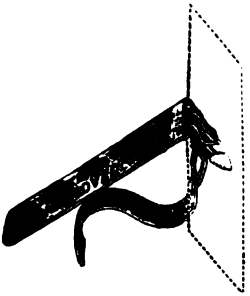

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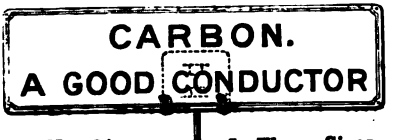

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The object of the Association shall be the promotion of better and more systematic working of Museums throughout the Kingdom. In order to promote a better knowledge of Museums, the Association shall meet in a different town each succeeding year.

That each Museum contributing not less than one guinea a year be a Member of the Association, and that individuals interested in scientific work be admitted as Associates on payment of 10s. 6d. annually.

That each Museum be represented by three delegates, each having one vote. Each Associate to have one vote.

That each Museum belonging to the Association and each Associate receive one copy of the publications of the Association.

That a General Meeting of the Association be held annually, for the transaction of business, the reading o papers, and the discussion of matters relating to Museums.

MUSEUMS ASSOCIATION.

Some of the earlier volumes of the Report are nearly out of print, and Museums requiring complete sets should order them at once. Particulars can be obtained from the Secretary, Museum, Sheffield.

THE MUSEUMS JOURNAL.

Vol. 2. *September, 1902.* *No. 3.*

A Museums Directory.

WITH the present issue of the *Journal* is published the first instalment of a directory of musems in Great Britain and Ireland, which it is proposed to continue as a monthly supplement until its completion, probably in two years' time. There can be no question as to the great usefulness of such a directory to all those who are engaged in museum work or in any way interested in such institutions, for there is nothing approaching even a complete list of museums at present in existence. Many years ago the British Association published such a list, without giving quite as full information as was desirable, and later a list on similar lines appeared in Mr. Thomas Greenwood's "Museums and Art Galleries." That book, however, is fourteen years old, and not only have museums multiplied exceedingly during the passage of those years, but there is a much more wide-spread desire for more detailed information about them than could possibly be given in a tabulated statement covering a few pages. It has consequently been felt in the present instance that each museum should be separately treated, as the information must necessarily vary in different towns. The general idea is to devote a page to each museum, arranging the facts relating to them all in regular order. The pages will not be numbered, and it will be possible on completion of the work to separate them from the *Journal*, and bind them in a distinct volume. As far as possible the museums will be arranged in alphabetical order, though, as the Directory will be kept quite up to date a strict adherence to this order may not be practicable, but as each page will only relate to a single museum, where information about it can be obtained, there will be no difficulty in re-arranging the

pages alphabetically when the work is completed. The co-operation of all museums is earnestly invited to make the Directory complete.

After the title of the museum, there will follow the constitution of the governing body, the staff, number of visitors, time and terms of admission, income and expenditure, and other matters concerning administration. A very valuable feature will be a summary of the nature of the collections, specially noting any of a distinctive character, and this will enable students and specialists to know where to find the particular material they may most require for the pursuit of their researches. Under the head of "General Information" will be given particulars of the history of the museum, together with any information as to its use and development as may be considered interesting.

In order to obtain all these particulars about museums, tabulated forms have been sent to each town in the kingdom which possesses a museum, and the extent and completeness of the information published necessarily depends upon the officials of the museums, and it is hoped that the value of this directory to all alike will induce them to assist to the fullest possible extent in making it thoroughly reliable and complete in every direction.

Mr. H. M. Platnauer, of The Museum, York, has kindly undertaken to collect the material and prepare it for publication; and he will be glad to receive information of any museum that may be inadvertently omitted, or any further particulars that may be thought useful. Suggestions from members of the Association, or any museum officials, with regard to the directory will be gladly welcomed.

Although it is customary to designate art museums as art galleries, the word museum as applied to the directory, and also when used generically in this *Journal*, always applies to science and art museums alike, and they will both be included. As information about the national museums can be easily obtained from many published sources, they will not be dealt with, the directory being confined to provincial and metropolitan museums that are not maintained by Government.

About "General Notes."

AT the Bradford Conference of the Association many members referred to the "General Notes" which have become such a special feature of the *Journal*, and there was some curiosity to discover the means by which the news given in these notes reach the editor, especially as there was no item in the accounts relating to them. The editor wishes that he could acknowledge help in this direction received direct from directors and curators of museums, whom, it might be thought, would be desirous of acquainting their curatorial brethren with any fresh facts relating to the institutions they manage with such distinct ability, and it might almost be said also with affectionate care. But the strong wish for grounds for gratitude for such special favours does not receive any great encouragement, it being quite exceptional for any member of the Association, beyond those whose names appear in conjunction with the editor on the title-page, to let the museum world, reached by this *Journal* more completely and effectively than in any other direct way, know anything of their good fortunes or developing conditions. Fortunately, however, the information finds its way into the public press; though when there it would be still unavailable for editorial comment or journalistic use in this particular publication if it depended on the researchful eye of the editor, for he has not a very extensive acquaintance with the newspaper press. But luckily for the *Journal*, he has the good fortune to possess a local colleague, whose all-scanning eye never misses any item of news, and whose kindly disposition ever constrains him to convey it to that channel where it will be most serviceable. To Mr. Samuel Smith, chief librarian of Sheffield, the *Journal* is mainly indebted for the source of most of the news items that appear in its pages; and the editor's feeling of gratitude, which will be shared by every reader of the *Journal*, is only exceeded by his sense of amazement at the exhaustive manner in which Mr. Smith culls from the newspaper press of the kingdom everything relating to museums.

This also brings into prominence a fact that is distinctly gratifying to all interested in museums, revealing the importance that is quite obviously attached to them in the minds of newspaper editors. Of couse they must feel that items of museum news are welcomed by their readers, or they certainly would not publish them so freely, and this shows how closely museums are appreciated by the general public. They are undoubtedly a very essential part of civic life, ever widening their influence, and in no way is this more forcibly demonstrated than by the attention given to them in the public press. Each month from Mr. Smith alone is received several columns of newspaper cuttings all relating to museums, cut out from the press of the whole country. As readers of the *Journal* are aware the information sometimes given in a newspaper has been so directly interesting as to be inserted in full, though perhaps they do not always recognise that the news given under the heading of "General Notes" is in great part founded on newspaper paragraphs. Some of the London daily papers have regular weekly contributions on museum subjects, while in all the principal ones the additions to our national museums are regularly recorded. In the provincial press the same custom is followed with mutual benefit to the institutions and the public alike, for if the extensive publication of museum news testifies to the value set upon them by a discriminating press, so must it tend to increase the knowledge and personal interest of citizens in their museums when those in charge of them take pains to keep them informed of their work and growth. For museums are now-a-days the most democratic and socialistic possessions of the people. All have equal access to them, peer and peasant receive the same privileges and treatment, each one contributes in direct proportion to his means to their maintenance, and each has a feeling of individual proprietorship. As the human race advances in knowledge and culture so must museums not only keep pace with them, but they should be distinctly leading them on to higher things both of learning and of sense impression.

And to come back to the original thought suggesting this article, if information about museum work and growth is so eagerly desired by the general public as the attention given to

it by the public press so plainly indicates, what a direct duty is plainly before all curators to see that their own journal is supplied at first hand with all information of a like kind. The recognition of this duty is imperative, for it may not always be possible to have the invaluable help now so cheerfully rendered by Mr. Samuel Smith.

On the Oceanographic Museum of Monaco.

By Dr. Jules Richard.

Translated from the Transactions of the International Geographical Congress, Berlin, 1899.

THE ceremony of laying the foundation stone of the Oceanographic Museum of Monaco took place on April 25th, 1899, under the patronage of His Majesty the Emperor William II., and the following are the general lines on which Prince Albert intends to carry on the institution.

The first idea of the Prince was to establish an institution for receiving and rendering accessible the important zoological collections which he has brought together during the scientific voyages which he has made since 1885, either in the "Hirondelle" or the "Princesse Alice"; but this idea rapidly expanded, as is evident by the name, "Oceanographic Museum." The museum will contain, not merely the collections of specimens and apparatus made by the Prince, but also everything which can be classed under the general head of oceanography. Thus understood, the Monaco Museum will become a unique institution.

The situation has been so chosen by the Prince, as not to interfere with the magnificent gardens which surround the museum. The shape of the building is elongated, and the front, as seen from the sea, is very stately. There is a ground floor of 100 metres in length, and the buildings comprise a central portion, 20 metres long by 20 metres wide, flanked on either side by a wing 40 metres long by 15 metres wide. This arrangement obtains upon the ground floor and the first floor; above, there will be a top storey, rising to a height of 75 metres perpendicularly above the sea. Beneath the ground

floor there will be two lower storeys, well lighted on the side of the sea, and destined to contain laboratories, rooms for the preparation of collections, library, workrooms for several persons, aquaria for purposes of study, porter's lodge, &c. The ground floor and first floor will be used for the exhibition of different collections, and the central part of the former will be so arranged that it may easily be used as a reception or committee room.

The arrangement adopted is that indicated by the contour of the ground, and is the most advantageous possible from the point of view of lighting. There will always be plenty of light, which can be diminished at will.

Omitting details of construction, we may pass on to state what kind of objects will be placed in the museum. Generally speaking, it will receive everything connected more or less closely with oceanography: the apparatus used in oceanographic research, and the concrete results obtained: floats, etc., for measuring the force and direction of currents: machines for sounding, with their accessories, and the specimens dredged from the depths of the ocean: various bottles for obtaining samples of water, with their temperature, from different depths, in order to facilitate the study of the density and chemical composition: apparatus for testing the penetration of light into the ocean depths, &c. Further, the museum will contain all the various devices employed by the Prince and his assistants for catching marine animals: pelagic nets for the surface and the depths, dredges, trawls, swabs, tow nets, harpoons, fishing tackle of all kinds, windlasses, reels, accumulators, and other apparatus. Either the actual instruments or reduced models of them will be shewn.

But the greater part of the museum will be devoted to the zoological collections whose true value can only be appreciated when they are rendered accessible. Every class will be represented, from the largest cetacean to the smallest protozoon. The collections of the Prince are especially rich in examples of the deep sea fauna: the trawls of the "Princesse Alice" have investigated a depth of more than 5,000 metres, and dredging has taken place in the Eastern Mediterranean, the

North Atlantic, off the coast of Morocco, and in the glacial Arctic Ocean in 80 degrees north latitude, beyond Spitsbergen.

These collections will be arranged in zoological order, but in addition to this, in order to give a complete idea of the typical fauna of a given level, the creatures which inhabit it will be grouped together, and I think that this will afford a very interesting series of comparative groups.

Moreover, in addition to those exhibited, there will be specimens for study, especially adapted to the requirements of specialists. Duplicates will be exchanged with other museums, in order to render the collections as complete as possible. Comparative anatomy will be dealt with as well as pure zoology: for instance, studies will be made of the luminous organs of deep-sea animals, of the unusual development of sensory organs, &c.

A large number of maps and diagrams will complete the series of documents relating to the geographical and bathymetrical distribution of animals, the nature of submarine deposits, the distribution of density, temperature, &c.

There will also be interesting photographs and radiographs; and, thanks to the installation of aquaria for study, a series of researches undertaken by competent persons will increase our knowledge of the biology of the ocean. An illustrated catalogue of the museum will be published, in addition to various works dealing with the results of the scientific voyages of the Prince.

It has only been possible here to indicate briefly the spirit in which the Oceanographic Museum of Monaco will be constructed and organised. The building is already well advanced; and there is no doubt that, thanks to the different elements concentrated there, the museum will be an absolutely unique institution, and will worthily crown the efforts of Prince Albert of Monaco, whose devotion to science has already so well earned the gratitude of all her votaries.

Museum Publications.

THE MAKING OF A NAVAJO BLANKET, by George H. Pepper, of the American Museum of Natural History.

This is a most interesting account of a curious tribal industry, partly aboriginal and partly learnt from the Spanish conquerors. A complete description of the methods adopted, which are rendered easily intelligible by a series of good photographs, is given. The trail of the serpent is noticeable in the use of aniline dyes, but we are glad to have assurance that the authorities of the U.S.A. are trying to keep the work as native as possible.

THE WILSON BULLETIN. No. 38. March, 1902.

This is a quarterly journal of ornithology, more especially devoted to field work. There is an observant article on the rock nuthatch and its nest, and a very witty skit on the mannerisms of the advocates of the trinomial system of nomenclature. Altogether a very creditable production.

THE CARNEGIE MUSEUM, PITTSBURGH. Annual Report of the Director, for the year ending March 31, 1901.

The museum will by this time have a specimen of *Rhinocerus simus*, of which only four other specimens exist in European museums, and the solitary one in the New World. The collection of insects has been increased by the purchase of the Ulke collection of coleoptera, and numerous additions have been made in the botanical section. Mention is made of the circulating collections, and it is stated somewhat erroneously, "that this is the only museum in which this method of utilizing natural history material has thus far been employed." This may be true as regards the U.S.A., but in this country school cabinets have been issued for a score of years both in Liverpool and Sheffield. A description of the Liverpool system of circulating cabinets was published in the report of the Museums Association for 1890, pp. 54-68. The value of the report is much enhanced by the many admirable illustrations.

FIELD COLUMBIAN MUSEUM. Publication 56: Archæological Investigations on the Island of La Plata, Ecuador, by George A. Dorsey, Curator, Department of Anthropology.

Publication 55: The Oraibi Soyal Ceremony, by George A. Dorsey and H. R. Voth.

Publication 61: The Oraibi Powamu Ceremony, by H. R. Voth.

The Island of La Plata, Ecuador, lies about thirty miles from the coast and south of the equator, and during historic times has been uninhabited except by a light-house keeper since 1889. The excavations yielded many valuable finds of pottery, images of various metals, weapons, &c.

The images were all female and agree in design with those of the Cuzco Valley, Peru, and were probably hammered into shape over some model. Perhaps the most remarkable find was a ceremonial stone axe, 19½ inches in length, 12½ inches in the broadest part, and in thickness nowhere exceeding ¾ inch, made of grayish trachite, beautifully polished and in almost perfect condition. Probably it was used as a sort of gong or bell. A large number of engraved rectangular and circular stones made of a grayish white volcanic tufa were found, the use of which is uncertain. The earthenware images mostly possess a hole in the occipital region, by which means the one or two whistles in the interior were blown. None of the pottery was of a utilitarian character. The author concludes that the island was used as a place for the celebration of religious rites, and quotes from Cieza de Leon in support of this theory.

The commander-in-chief of the Ecuadorian army, through whose assistance the exploration was performed, stipulated that he was to receive currency to the amount of one-half the value of the gold and silver found. The whole of the objects discovered are beautifully illustrated and are now on exhibition in the museum at Chicago.

The Oraibi Soyal Ceremony—Soyalunwu—is performed by the Hopi Indians living about the Grand Canon of Colorado some time during the month of December. It has for its object the invocation of blessings on the food for the ensuing year, and lasts nine days, followed by three days' rabbit hunting, and on the fourth day ending with a procession.

The preliminary ceremony—Baholawu—consists in making bahos, which are prayer offerings made of sticks to which feathers, herbs, and a corn husk packet containing cornmeal and honey are attached, these are consecrated by the chief priest smoking over them. The nine days of the ceremony have the following names:—First day, Yunna (going in); second day, Shushtala (first day); third day, Loshtala (second day); fourth day, Bayishtala (third day); fifth day, Naloshtala (fourth day); 6th day, Shushkahimuu (once, not anything); seventh day, Piktotokya (piki making); eighth day, Totokya (food providing); ninth day, Tikive (dancing day). Each day has its appropriate ceremony, which is fully described in the text and further elucidated by photographs, many taken under conditions of great difficulty.

On the ninth day the bahos are placed in houses, tied to ladders to prevent accidents, placed in the chicken houses "that the hens may lay eggs," into the beef and sheep corrals, and tied to horses' tails, dogs', goats', and sheeps' necks, &c., "for increase," tied to the peach trees as prayer for large crops, deposited in springs for an abundant water supply, and disposed of in many similar ways. The men are required to practice the strictest continence, not only during the nine days' ceremonial but also during the four post-festival days. If anyone fails to comply with this rule and is found out a dish of Sakwawotaka, made of blue cornmeal and seasoned with salt is prepared, and the man is compelled to proclaim his own shame by carrying the dish in the procession; this resembles the penance exacted by the Scottish Church in bygone days.

The Oraibi Powamu Ceremony of the Hopi Indians occurs about the month of February. Eight days before the ceremony proper an introductory performance called the Powalawu takes place. One of the most interesting features is the making of an altar of sand mosaic, the centre has the sun symbol and is surrounded by four circles, which the author states represent the perihelion, in colours, and is followed by ceremonial songs

The Powamu Ceremony lasts ten days, on the fourth day two altars, one large and one small, of sand mosaic are made; on the fifth day the Initiation Ceremony takes place, usually

the initiates are children between five and ten years of age; on the sixth day the Katcinas, who are men dressed in various weird costumes and masked, flog the candidates with switches of yucca leaves to forcibly impress on their minds the necessity for secrecy and remembrance, somewhat the same in idea with the flogging of boys in England at the ancient beating of the boundary. On the ninth day amongst other things a visitation is made by Katcinas called in this part Cooyoktu, who go to houses where the children are naughty or disobedient and frighten them into good behaviour; perhaps such an idea is not feasible with us, but we can recall cases where it might be used with advantage. On the evening of this day a peculiar dance is indulged in.

This ceremony, apparently based on nature worship, is extremely intricate and important, and the researches have been carried out over a series of years. The requisite funds have been provided by Stanley McCormick, and to him and the workers who under conditions of great difficulty have studied these abstruse ceremonies, a debt of gratitude must be felt. As in all these American publications the utmost care has been exercised, and much help is afforded by the almost lavish way in which every possible detail is brought out by means of photographic reproductions.

FIELD COLUMBIAN MUSEUM. Publication 57: A List of the Land and Sea Mammals of North America.

Publication 58: A List of Mammals obtained by Thaddeus Surber in North and South Carolina, Georgia and Florida.

Publication 59: The Caribou of the Kenai Peninsula, Alaska.

These three papers are by D. G. Elliott, curator of the Zoological department. The lists of mammals are works of the utmost value, and as those know who have had similar compilations to make the outward appearance is not at all commensurate with the labour involved, but it is work which is highly appreciated by those who have the labelling of specimens to do, and it will prove an invaluable help in time of doubt. The beautifully illustrated paper on the Alaskan Caribou is a criticism on an attempt to form a distinct species apparently on insufficient grounds; more evidence is required on the subject before doing so.

ANNALS OF THE CARNEGIE MUSEUM. Vol. I., Nos. 1 and 2.

No. 1 opens with some editorial remarks which are worthy of attention. "The publication of the observations and discoveries of those who form the staff of a well-organized museum, has always been recognized as a proper function of such an institution," and it is only justice to say that in this instance it has been well carried out, and the articles are all of interest. I. The Crayfish of Allegheny County, Pa., by E. B. Williamson. The crayfish of the Northern Hemisphere belong to the genera *Astacus* and *Cambarus*, of which the latter are to be found in North America east of the Rocky Mountains, and the *Astacus* west of the Rockies to the Pacific coast. The colour of the living crayfish is specially noted. II. A Preliminary List of the Vascular Flora of Allegheny County, Pa., by John A. Shafer. This is one of those laborious compilations which we cannot criticise but can most highly commend. III. Some New and Little Known Fossil Vertebrates, by J. B. Hatcher. This is based on the material brought together by a palæontological expedition in 1900, of which perhaps the most noteworthy is the impression on a slab of sandstone of the dermal covering of *Claosaurus*, Marsh; the new species named *Leptochoerus quadricuspis* (suborder Artiodactyla), and a lucid description of the *Trigonias osborni*, Lucas. IV. The Reptiles of Allegheny County, Pa., by D. A. Atkinson. With the exception of *Ancistrodon contortrix* the snakes of this district are not poisonous; the bite of a copperhead only eight days old caused a painful inflammation of the finger which lasted four days. Lizards are uncommon but turtles abound; a specimen of *Chelydra serpentina* weighing 42 lbs. was caught at Erie in June, 1900. V. Osteology of Herodiones, by Dr. R. W. Shufeldt. This is probably the most important and valuable monograph in the Annals, and deals with the entire suborder of the American Herodiones. With regard to the spoonbill, its feathers are bringing upon it the same fate as has befallen the grebe in this country. "During the past few years thousands upon thousands of spoonbills have been slaughtered in Florida for the markets, by the most unprincipled of 'feather hunters' to gratify the demands of a barbarous fashion. The bodies of these birds are

allowed to rot in the heronries where they are shot, stacked up in heaps—yet for two years I have tried to secure even one skeleton for my present purpose, without success." The osteology of the *Ardea herodias* is given at length, and the comparative osteology of the group is very fully worked out. The author considers that the Herodiones are linked with the Anseres and the Flamingoes, and gives a taxonomical scheme based on his researches.

No 2 modestly alludes to the reception—amply deserved—which No. 1 achieved, notes are given of protective colouring in *Cambarus virilis*, Hagen; the collecting parties in North-East America, and in the Canon City fossil beds are reported to have been very successful in acquiring material; mention is made of the gift by Mr. Carnegie of one of the five ancient boats found at Dhakshur, about 20 miles above Cairo. VI. On the Cranial Elements and the Deciduous and Permanent Dentitions of Titanotherium, by J. B. Hatcher. Amongst much other valuable material collected by the Carnegie Expedition (Vol. I., No. 1, pp. 5, 6, 7) are the skull and portions of the skeleton of a young titanothere, most of the cranial sutures are still open, making it possible to determine the character of the different bones, the milk dentition is still preserved, so that this can be studied, while the permanent dentition is sufficiently advanced to indicate definitely the method and order of replacement of the deciduous by the permanent teeth. The conclusions arrived at by the author are worthy of attention. VII. Sabal rigida; A New Species of Palm from the Laramie, by J. B. Hatcher. The specimen described was found embedded in a block of sandstone, in the upper Ceratops beds, in Converse County, Wyoming, in 1900. The find is interesting as pointing to the existence of climatic conditions required for the maintenance of the exceedingly rich dinosaurian fauna known to have inhabited this region. VIII. Supplement to Dr. John Hamilton's List of the Coleoptera of South-Western Pennsylvania, by Henry G. Klages. The list contains 388 species and 26 varieties, and is an able contribution to the subject. IX. Osteology of the Flamingoes (Odontoglossae) Family; Phoenicopteridae, *Sp. P. ruber*, by Dr. R. W. Shufeldt, C.M.Z.S. The skeleton of

P. ruber is minutely compared with the corresponding bones occurring in the North American mergansers, ducks, geese, and swans on the one hand, and the ibises, herons, storks, and their immediate allies on the other. The conclusions arrived at are that the flamingoes form an independent group—Odontoglossae—corresponding exactly with Huxley's Amphimorphae, an intermediate group standing between the anserine fowls and the pelargo-ibine forms. X. Description of a New Species of Baëna (B. Hutcheri) from the Laramie Beds of Wyoming, by O. P. Hay. The carapace and plastron of this turtle are preserved, the carapace has a total length of 368 mm., greatest breadth 280 mm., height from the bottom of the plastron about 145 mm. The genus Baëna has been known hitherto only from the Wasatch and Bridger beds of the eocene. This discovery carries the genus back to the upper creaceous. XI. The Jurassic Dinosaur Deposits near Canyon City, Colorado, by J. B. Hatcher. The geological section of this locality begins with the Triassic red sandstones, immediately overlying which are a series of brown sandstones, shales, and marls, with occasional thin seams of limestone, this entire series is referred to the Jurassic on the evidence of the dinosaur remains found in them. These remains are found in abundance at several horizons, both in the sandstones and shales, while the limestone layers are rich in small fresh water gastropoda, and in one of the marl beds great numbers of *Unio* shells and casts have been obtained. Overlying the Jurassic is the Cretaceous consisting of the Dakota sandstones, the Benton shales, the Niobrara, used commercially for the manufacture of Portland cement and the Pierre shales. The bone quarries were discovered in 1876 by the family of Mr. M. P. Pelch, and were worked by Mr. Williston, Professor Marsh, and Professor Cope; the present investigation is a reopening of the quarry which lack of funds compelled Professor Marsh to abandon in 1884. From all present appearances there are yet many valuable finds to be made.

HULL MUSEUM.

No 10 of the publications of this museum has come to hand. It contains, among other matters, an account of the finding

and acquisition of a nearly complete skeleton of *Ichthyosaurus thyreospondylus* from the Kimeridge clay of Speeton; a paper on educational museums by the curator (Mr. Thos. Sheppard) and an account of the re-opening of the Hull Museum by the mayor. On the latter occasion, speeches were made by Sir James Reckitt, Dr. Woodhouse, Colonel Wellsted, councillor Hall and by the mayor himself, all of which shewed a keen appreciation of museums on the part of the speakers. Mr. Sheppard's practice is to publish descriptions and notes of specimens in the Hull Museum (especially of those recently acquired) periodically in the local press, and to collect reprints of these from time to time. By these means he keeps alive a continuous interest in the museum and its doings, while the collected reprints form a history of the museum, and a *catalogue raisonnée* of its most noteworthy specimens. The plan might, with advantage, be tried by many other curators of provincial museums.

Anthropological Museums in the United States.

AN ACCOUNT OF SOME RECENT PAPERS.

AT the meeting of the Anthropological Section of the American Association for the Advancement of Science, there were read several papers on museum subjects other than that on Asiatic museums, by Professor G. Frederick Wright, which is reprinted on another page.

Mr. Frederick Houghton read a paper on "Co-operation between the Anthropological Musuem and the Public Schools," and gave an outline of work possible for a museum to do in connection with the school, with descriptions of experiments already made by the Buffalo Society of Natural Sciences. This paper is to be published in full by the *Journal of Education*.

A similar paper—"Uses of Archeological Museums in Education in the Public Schools"—was contributed by Mr. Lee H. Smith.

Mr. Stewart Culin read a somewhat metaphysical paper on "Anthropological Museums and Museum Economy." The abstract informs us that the science of anthropology is distinguished by the addition of mentality to the mobility, vitality, affinity, and gravity which characterise the leading older sciences. It cannot be said that such remarks as these present much practical assistance to museum curators; but we find nothing else in the report of the paper.

The "Classification and arrangement of the collections of an Anthropological Museum" was discussed by Dr. William H. Holmes, whose complete paper is to be published in the Annual Report of the U.S. National Museum, for 1901.

Mr. Harlan I. Smith's paper on "Methods of collecting Anthropological material," which is published in the *Wisconsin Archæologist* for May, 1901, should be of interest to an active curator; but we confess that the terminology of his abstract is a little obscure to us.

It is refreshing to come down to a more humble, but thoroughly practical and valuable paper, on "The preservation of museum specimens," read before the Section by Mr. Walter Hough. It summarized the experience gained during the past seventeen years in the treatment necessary to preserve museum specimens from attacks of insects, from dampness, dust and the like. A portion of the process of poisoning specimens adopted in the U.S. National Museum is thus described:— Take an air-tight box—a packing case lined with grocers' or manilla paper will do. Place the fabrics or objects therein, and, after pouring in gasoline, close the lid tightly, and leave it for a day or so. It has been found that woollens, furs, &c., treated in this way will not be subject to the attack of moths for a long time, as the oily substances in the animal fibres, on which the moths feed, have been removed to some extent, leaving the fabric undesirable. Decorative objects, with which one does not come in immediate contact, may be brushed with a weak solution of corrosive sublimate in alcohol, one-fourth ounce to the quart.

It is distinctly encouraging to the members of our profession to find practical museum subjects bulking so largely in the report of a single Section of the American Association. Further

evidence, if such were needed, of the influence of museums on anthropological work in the United States is offered by the presidential address recently delivered by Dr. A. C. Haddon to the Anthropological Institute, and now published in its *Journal*. From this we make the following extracts:—

"The head curator of the department of anthropology in the National Museum, Dr. W. H. Holmes, is gradually working out his conception of what his museum should be. His object is twofold:—(1) To illustrate the cultural history of mankind; (2) to demonstrate the distinctive characteristics of the various races and people. Numerous series of objects have been installed to illustrate the progress of culture, such, for example, as the various stages of evolution from stone implements, on the one hand, to the most modern steel tools and engineering appliances on the other. In this work the curator has been ably helped by the veteran, Dr. Otis T. Mason, whose writings on technology are so well appreciated by students. An admirable land-transport series has been got together, and one hall is devoted to a wonderful collection illustrating transport by water. There is also an interesting section devoted to comparative religions, of which Dr. Cyril Adler is the custodian. No Government in the world does so much for ethnology as does that of the United States."

"The Free Museum of Science and Art in Philadelphia contains some very valuable and pleasingly arranged collections of Babylonian, Egyptian, and Etruscan antiquities. Good representative collections of American ethnology and and archæology are being got together, owing to the exertions of Mr. Culin, the director. Of the special collections given to the university, mention need be made only of the collection of gems, of musical instruments, and the Furness-Hose collection from Sarawak. In the museum is also to be found Mr. Culin's very instructive and almost exhaustive collection of games, but unfortunately it is stowed away in drawers. If this collection was adequately exhibited it would give to the museum a unique position among anthropological museums. It is instructive to note that, although this is a university museum, no support is received from the university, all the scientific work being prosecuted by funds raised from private

sources, a result largely due to the enthusiasm of Dr. Sara Y. Stevenson, the energetic Secretary of the department."

"The anthropological department [of the American Museum of Natural History] has accomplished an unprecedented amount of research during the past year, a large sum of money having been received from private sources for the purchase of several important collections of American archæology and ethnology, and for the expenses of many expeditions in the field."

"The greater part of the anthropological collections in the Yale University Musuem are archæological in character. The Peabody Museum of Harvard University is already overcrowded and fresh collections are constantly arriving, which the curator, Prof. F. W. Putman, is forced to keep in boxes in the store-rooms. The main collections are the results of the digging of mounds in the Eastern and Central States; thus the archæology of that portion of America can be very well studied in the museum. During the years 1887-1893 the late Mrs. Mary Hemenway provided funds for archæological and ethnological expeditions to the Pueblo Indians of Arizona and New Mexico."

"The history of the progress of anthropology in Chicago is eminently characteristic of that typical American city. There is no need to give a detailed history of the anthropological department of this museum [the Field Columbian Museum], as Dr. Dorsey has already done so in the *American Anthropologist*, n.s., II, 1890, p. 247; but I will briefly indicate the main collections and their origin. The anthropological collections which formed the foundation of the department were obtained through special expeditions sent out under the direction of Prof. F. W. Putman, or by collectors resident in the field, who were commissioned by the department of ethnology to undertake the work. A mass of interesting and valuable material from Alaska to Peru was thus accumulated. A few collections from other quarters of the globe were also obtained. The history of the museum since then has been one of almost unparalleled activity. Expedition after expedition has been sent out to collect ethnological and archæological

material in North and Central America; some of these have been paid for out of the museum funds, while others have been rendered possible by special donations from benefactors, most of whom are Chicago merchants. The more technical aspect of the museum has been so well described by Dr. A. B. Meyer, that I need not dwell upon it."*

"The most recent inauguration of anthropological activity is that displayed by the University of California. A department of anthropology was established by the Regents of the University in September, 1901. As an encouragement to others and as an expression of her great interest in the new department, Mrs. Phœbe A. Hearst, who is one of the Regents and a most generous benefactor to the University, has promised £10,000 (50,000 dollars) a year for five years for anthropological research. In this manner is struck the key-note of the new department. Research first and foremost. We may look forward in the immediate future to the establishment of a really important museum on the Pacific coast which, being under the jurisdiction of the University of California, will be the centre of considerable anthropological research and instruction. Now that the financial position of the Stanford University at Palo Alto is permanently secured, it is to be hoped that the claims of anthropology will not be overlooked."

Dr. Haddon closes this section of his address by referring his hearers to the above-mentioned report by our member, Dr. A. B. Meyer, which he characterises as "invaluable to all those who are interested in the promotion or maintenance of museums and libraries," and he expresses the hope "that no architect in the future will attempt to draw up plans for a new museum or library until he has consulted this work."

* See our review of Dr. Meyer's Report, *Museums Journal*, Vol. I., pp. 281-305, pl. ii, April, 1902.—EDITOR.

General Notes.

AT HOME.

NORWICH MUSEUM.—The "List of 'Type,' Figured, and Described Fossils in the Norwich Castle Museum," prepared by Mr. Frank Leney and alluded to in our June number (vol. I., pp. 365-6), has been re-issued, with a preface by Dr. Henry Woodward, in a paper wrapper bearing a somewhat altered title, the whole forming a pamphlet of 20 pages, which may be had gratis on application to the curator of the Castle Museum, Norwich. Dr. Woodward adds the information that several teeth of a fossil rodent—*Mimomys pliocænicus*—preserved in the Norwich museum, have recently been described and figured by Dr. C. I. Forsyth Major, in the *Proceedings* of the Zoological Society of London. Dr. Woodward also suggests, that a similar list of the types and historical specimens of birds in the Norwich museum, ought to be prepared and published.

HARRIS ART GALLERY, PRESTON.—The art exhibition in the Harris Art Gallery, Preston, inaugurated in connection with the Preston Guild Merchant, will remain open during the autumn. In addition to the special attraction of this show, there is the permanent collection of pictures, also on view in the Harris Institute. It is particularly rich in the work of John Linnell, one of the most powerful and romantic of English landscape painters. There is also a profusion of the careful "still-life" pictures of William Hunt, and some very interesting examples of the beginning and middle periods of the nineteenth century, including a most beautiful little Turner, in a style quite unusual with that master. The Harris Free Library, Museum, and Art Gallery is well worth seeing as a building. It is one of the most strikingly effective examples of classic architecture in the country; and within-side, among its various contents, and in addition to the collection of pictures, are casts of sculpture, art objects from South Kensington, and autotypes of famous paintings. In fact, it is a treasure-house of art and learning of which the Prestonians may reasonably be proud. After a visit to it, one cannot help recalling the observation of the sapient town councillor, who, when the building was offered to the borough, demurred to the gift on the ground that it would cost £200 a year to clean the windows.

SIR JOHN SOANE'S MUSEUM, LONDON.—Sir John Soane's Museum has closed its doors for the season, and the curious old house in Lincoln's Inn Fields will not again be open to the public until March. To Londoners it can matter little

whether the house is open or shut, for it is safe to say that comparatively few of them know of the existence of the museum, and fewer still could describe its situation off-hand. Americans, who know the show places of the Metropolis better than the veriest Londoner, of course, long ago discovered the Lincoln's Inn Fields house, and a good many Transatlantic visitors go each season to inspect the treasures of the old architect, who built the Bank of England. A famous American novelist has even brought the museum into one of his stories, where it figures as the scene of some clandestine love meetings, for which, by the way, it is entirely unsuitable. Though Londoners patronise it so little, there are many things in Sir John Soane's Museum that make it worth a visit. The house itself, practically untouched since Sir John died in the year of Queen Victoria's accession, is worth seeing for its furniture and its quaint arrangement, and while many of the old architect's treasures are more curious than valuable, some are of the highest interest. The pictures include a Reynolds, "The Snake in the Grass," which Sir John bought at the sale of the effects of Sir Joshua's niece, the Marchioness of Thomond; a very fine Turner, Admiral Tromp's Barge entering the Texel," two Canalettos, in each of which, curiously enough, the fallen Campanile figures prominently, a Watteau, several Lawrences, and numbers of studies by Flaxman. But Hogarth is more strongly represented than any other artist in the museum. Here is the entire series of "The Rake's Progress," eight canvases that were once in Beckford's collection at Fonthill, and the four paintings illustrating "An Election," which Sir John Soane bought after Mrs. Garrick's death for 1,650gs. Though the trustees of the museum have decreed that it shall be closed to the general public for six months in each year, permission to view the collection during the recess can generally be obtained on application to the curator.

EXHIBITION IN BRADFORD.—The Town Council of Bradford has decided that it be an instruction to the Libraries, Art Gallery, and Museum Committee, to consider and report upon the suggestion, that an exhibition of art and industry be held in Bradford in 1904 on the occasion of, or, following the opening of the Cartwright Memorial Hall, in Lister Park.

THE NEW ART GALLERIES OF GLASGOW.—In the quiet reigning in Kelvingrove, where the Exhibition buildings are daily melting away, the art galleries will soon be able to make their proper impression. With their five thousand square yards of marble flooring (the largest area outside Italy), and the magnificent internal arrangements, they will probably form a favourite resort. The building itself is one of the finest of its kind in Europe. The richly ornamented courts opening

into one another, and built with the creamy stone from Giffnock quarries, are in themselves objects for admiration. They all converge on the magnificent central hall, which has a height of eighty-five feet, the walls opening into balustraded galleries, and diversified with many sculptured devices. At the north end is the organ, placed on the first storey, for the recitals which are to be held from time to time. Viewed from the galleries, on a level with the ten massive electroliers, each weighing six hundredweight, the hall beneath, with its white statuary, has a beautiful effect. The statuary has already been placed in position in the central hall, and the exhibits in the other sixteen courts or galleries, and the eight corner pavilions, are being arranged with all despatch by Mr. Paton and his staff. They will be thrown open to the public probably in the course of next month. It is already manifest that the exhibits will form a collection of genuine attractiveness. The upper courts are devoted to paintings. From time to time it is intended to exhibit special loan collections, in addition to the pictures in the possession of the corporation. The loan collection with which the galleries will open will be one of great interest. To Mr. Pierpont Morgan the corporation are indebted for fourteen decorative panels by Jean Honoré Fragonard. Sir John Stirling Maxwell sends a selection of Blake's works. A French collection comes from Mr. Reginald Vaile, consisting of twenty-eight pictures by Boucher, Chardin, Greuze, Fragonard, Watteau, and others. Sir Charles Tennant has given on loan an interesting selection of English pictures by Gainsborough, Reynolds, Hoppner, and Morland. The Earl of Strathmore has promised several pictures by French painters, and Lord Tweedmouth is sending examples of the art of Raeburn and Reynolds. A magnificent landscape by Gainsborough comes from the collection of the Duke of Westminster. Mr. Arthur Kay, Glasgow, contributes several French and English pictures. The three galleries to the east on the first floor will be devoted to the old masters, while the corresponding galleries in the west wing will provide accommodation for modern works. The whole of this floor is to be used for artistic specimens, the galleries round the central hall being used for the exhibition of art objects. In addition to the sculpture in the central hall, which will also be used as an auditorium during musical recitals, the zoology, technology, antiquarian, and other sections find a habitation on the ground floor. In the east wing, one of the galleries and a corner pavilion are devoted to geology. The east court, round which the galleries are arranged, is occupied with zoological specimens, amongst them the conspicuous figure of "Sir Roger," the large elephant of the Scottish Zoo, which

had to be shot over a year ago. The end gallery holds the ethnological specimens. There are further zoological specimens in the other pavilion and gallery, the latter containing a British collection. One of the cases is filled with birds taken in the Kelvingrove Park. In the north gallery of the west wing are to be found British and foreign archæological objects. There are such items as the chair in which Burns used to sit "by his ain fireside" in his house at Dumfries, and Dr. Livingstone's relics. The north-west pavilion is devoted to Glasgow antiquities, which have been added to by the Andersonian collection. These will afford material for interesting observation. In the end gallery of the wing, which, with the adjoining pavilion and the south-west gallery provides accommodation for the technological exhibits, are several interesting engineering models. They comprise such examples as modern steamship engines, and curios like the first carriage steam motor engine used between Glasgow and Paisley in 1834, and a screw propellor vessel, designed in 1829 or 1830, with supplementary lateral screws in addition to the propellor at the stern. Then there are large models of ironworks, whisky distillery machinery, and specimens of British textiles and chemicals. Finally, in the west court, are a selection of the large models of Clyde-built war and mercantile vessels which were a great attraction of the grand avenue in the Exhibition of 1901.

THE WHITWORTH INSTITUTE.—In their report for the year 1901 the Council of the Manchester Whitworth Institute record with satisfaction the continued interest of the public in the exhibitions held in the galleries and their general enjoyment of the grounds of the Institute, especially on Sunday afternoons, and of the music provided by the band of the Ardwick Industrial Schools. The arrangement of the collections has been continuously improved, and the large amount of interesting and valuable additions by donation and purchase duly exhibited. Sir W. Agnew, Bart., the president, has again made very handsome gifts, viz.:—An oil painting by James Ward, R.A., "Farm Buildings with Cattle" (1810); a water-colour drawing by P. H. Calderon, R.A., "The Offering" (painted in 1868); a bronze figure by Albert Gilbert, R.A.; Laus Veneris, large photograph, after Sir E. Burne-Jones; drawing by R. Caldecott; Bird's Nest and Hawthorn Blossom, by William Hunt; Bird's Nest and Apple Blossom, by William Hunt; River Thames and Southwark Bridge, by William Hunt; "Macaws," by H. S. Marks, R.A.; "Sweet Lavender," by G. D. Leslie, R.A.; Pistolesis' illustrations of the Vatican at Rome, with descrizione del Campidoglio di Pietro Righetti, MDCCCXXXIII, together a beautiful and valuable work in

ten (portfolio) volumes. The council had already received the Vatican part of this work, and, with the approval of the donor, have had pleasure in presenting it to the library of the Municipal Technical School. Mrs. James Worthington has presented a handsome collection of 260 medals in copper of Frenchmen eminent in letters, science, art, and war, for which a special cabinet has been prepared. The cabinet will be placed in the library, and will be accessible on application to the curator. The council has also received a further portion of the series of photographs of paintings and architecture, and of urban and rural landscapes. This collection is all mounted and arranged in portfolios in cabinets for better preservation. A certain number are exhibited in the wall portfolio cases in the north basement gallery. The whole collection contains 2,000 photographs, and can be seen on application to the curator. The attendances of visitors have been during the year on week-days, 52,124; and on 47 Sundays, 27,285—total, 79,409. Music has again added greatly to the attractions and to the enjoyment of many visitors, at a cost to the Institute of £120, towards which the visitors have contributed £34. 9s. 10d. The council greatly regret the remarkable failure on the part of the many thousands of persons who visit the park, with evident satisfaction, to acknowledge by small contributions their appreciation of the efforts of the Institute for their enjoyment. The council have accepted with pleasure an invitation to undertake the nomination of two governors of this Institute to be members of the Municipal Art Gallery Committee, when it is reorganised under the proposed Manchester General Purposes Act of this year.

LORD LEIGHTON'S HOUSE—The committee for securing the house of the late Lord Leighton for the nation has published a report signed by Earl Percy, Mr. Lionel Cust, and Sir Robert Hunter, giving a full account of the negotiations to acquire the House Beautiful for the public, and their failure on the eve of apparent success. This unfortunate result was owing to a feeling on the part of Lord Leighton's representatives that the Kensington Borough Council, to whom it was proposed to hand over the house on condition of their maintaining it as a memorial of the great artist, did not appreciate the gift.

FORTHCOMING EXHIBITION OF ENGRAVING AND ETCHING.—The Board of Education have decided, at the suggestion of the Council of the Society of Arts, to hold during the early part of next year an exhibition of engraving and etching in the Victoria and Albert Museum, South Kensington. The exibition will consist of examples of copper and steel engraving, including line, mezzotint, and stiple (plain and coloured), aquatint, and etching. The Board are being assisted in the

selection and arrangement by an influential advisory committee. All communications respecting the exhibition should be addressed to the Secretary, Exhibition of Engraving and Etching, Board of Education, South Kensington, S.W.

DUDLEY ART GALLERY.—Mr. Edward Smith has given to the Dudley Art Gallery the painting of "The Dockers' Strike," by Dudley Hardy.

ASHMOLEAN MUSEUM, OXFORD.—Mr. Edmund Oldfield, of Torquay, who died last April, has bequeathed to the University of Oxford his cabinet of antiquities and various specimens of Greek, Roman, and Etruscan art in marble, bronze, and terra-cotta, and he desired that they should be placed in the Ashmolean Museum and be known as the "Oldfield Bequest."

ART IN EDINBURGH.—The Secretary for Scotland has appointed the Right Hon. Aretas Akers-Douglas, M.P. (Home Secretary), Sir John Stirling-Maxwell, Bart., M.P., Sir Walter Armstrong (Director of the National Gallery, Dublin), Sir Kenneth Mackenzie, Bart. (King's and Lord Treasurer's Remembrancer in Scotland), and Mr. T. R. Buchanan to be a committee to inquire into the constitution, powers, and duties of the Board of Manufactures, with special reference to the administration of the grants made by Parliament for purposes of art in Edinburgh, and to report whether and in what way such administration may be improved. Mr. Akers-Douglas will act as chairman, and Mr. Ewan F. Macpherson, advocate, as secretary to the committee.

THE BRITISH MUSEUM.—A return on the British Museum, giving detailed information on the work of the institution for the year 1901, has been issued as a Parliamentary Blue-book. It is stated that the grand total number of visitors to the museum in the year 1901 was 718,614. This is an increase of more than 29,000 on the total of the year 1900, which was 689,249; and that total, again, was an increase of more than 25,000 on that of the previous year. This gratifying augmentation of upwards of 54,000 visitors during the past two years, has carried the total of last year above the average of the years 1880-1883, when the removal of the natural history collections to Cromwell Road was accomplished and entailed a serious diminution of the numbers, the total for 1884 being only 468,873. It is also satisfactory that the number of visitors on Sunday afternoons has steadily increased year by year, the total for 1901 being 48,895, as against 43,892 in 1900 The number of visits of students to the reading-room has risen to 200,035, as against 198,566 in 1900, a daily average of 664. Important Egyptian antiquities, from very early graves at Abydos, have been presented to the department of Egyptian

and Assyrian antiquities, by the Egypt Exploration Fund; and the department has also acquired by purchase numerous other antiquities of the same character. It has also secured a further considerable collection of tablets from Babylonia of a very early period, including documents in the Sumerian as well as in the old Babylonian language. To the collections of the department of British and mediæval antiquities have been added:—The very valuable collection of Gaulish antiquities formed by M. Léon Morel; a series of remains, including bronze ornaments and pottery, from the Ticino valley, presented by Sir John Brunner, Bart., M.P.; and a remarkable early Christian bowl of glazed pottery, with other objects, the gift of anonymous donors who desire to be styled "The friends of the British Museum."

NATIONAL PORTRAIT GALLERY.—The trustees of the National Portrait Gallery have received, under the will of the late Sir Arthur Sullivan, the portrait of that eminent musician painted by Sir J. E. Millais, R.A. The trustees have decided to accept the bequest, suspending on this special occasion their usual rule as to the expiration of ten years from the date of decease. The portrait of Sir Arthur Sullivan, which had been deposited temporarily in the National Gallery of British Art, has now been removed to the National Portrait Gallery. The trustees have also accepted as a free gift the portrait of the Very Rev. Henry Hart Milman, D.D., Dean of St. Paul's, painted by Mr. G. F. Watts, R.A., and presented by the Dean's three sons, the Rev. William Henry Milman, Mr. Arthur Milman, and the late Sir Archibald Milman. The trustees have purchased from the executors of the late Miss Ann Smart a portrait, painted by Bradley, of her father, Sir George Thomas Smart, the musician who conducted the music at the Coronations of William IV. and Queen Victoria.

ABROAD.

VOLCANIC ERUPTIONS AT ST. VINCENT.—Dr. J. S. Flett, formerly lecturer on geology in the University of Edinburgh, and at present on the staff of the Geological Survey, has started on a scientific mission to investigate the recent volcanic eruptions at St. Vincent. The Board of Education have granted him leave of absence for the purpose, and the Colonial Office and the Foreign Office have agreed to bear part of the cost, while the Royal Society, under whose ægis Dr. Flett is to conduct the investigation, have contributed a sum of money from the Government grant for the advancement of science. With Dr. Flett goes Dr. Tempest Anderson, of York, who has made a special study of volcanic phenomena and igneous

rocks. The investigation may take several months, and it is expected that the results will be, in the first place, communicated to the Royal Society, though this can scarcely be done before late in the autumn.

EGYPTIAN EXPLORATION.—The American expedition sent to Egypt by the Californian Academy of Science, has made some remarkable discoveries at Girgeh, on the Nile. The explorers have been excavating on the site of the burial ground of the village, and have discovered rows upon rows of graves, dating back from the nineteenth dynasty in apparently unbroken record to the earliest pre-historic times. The bodies are mostly in wonderful preservation, in many cases even the brains are preserved. From an anthropological point of view the find is regarded as of extreme importance, especially in tracing the development, and studying the craniology of the Egyptian race. Dr. Elliot Smith, of the Cairo School of Medicine, is assisting in the investigation, which the Americans are conducting with praiseworthy care and method. With the ample funds with which the expedition appears to be endowed, the excavations should yield results of the greatest interest to Egyptologists.

HUNGARIAN NATIONAL MUSEUM.—The Hungarian traveller and scientist, Ludwig Biro, who has spent six years in making zoological and ethnographic studies in the Malay Archipelago, and especially in New Guinea, has returned to Buda-Pesth. He was heartily welcomed by representatives of the Government, officials of the Hungarian National Museum, and members of scientific societies. His collections, which are on so large a scale that it is expected some years may elapse before they can be completely examined and catalogued, he has presented to the National Museum. Among his zoological specimens are a number of species hitherto unknown to science. Professor Biro spent much of these six years in the primeval forests of New Guinea, far from European settlements, and suffered greatly from the climate, from fever, and from the hostility of the natives, though in time he so impressed the aborigines with his knowledge and power, that they came to reverence him as a sorcerer. He was formerly an assistant master in a Hungarian grammar school, and in order to obtain the means for his journey to New Guinea, sold his large collection of beetles and other insects, containing 60,000 specimens, to the Hungarian National Museum.

ARMY MUSEUM, PARIS.—The total number of visitors to the Army Museum in Paris during the past year amounted to 138,000. Among the most interesting gifts during that period were:—The bust of the Duc d'Aumale by Jérome, the gift of

the Duc de Chartres; a bust of Marshal MacMahon, the gift of his son, Commandant Patricæ de MacMahon; a bust of Murat, presented by Prince Murat; one of Marshal Berthier, given by Prince de Wagram; and various trophies of war, notably the musket which wounded Napoleon at Ratisbonne and the colours of the Infantry of Madagascar.

We learn from *Science*, that steps are being taken for the establishment of a medico-historical department in the Germanic Museum at Nuremberg, on the occasion of the fiftieth anniversary of its foundation. It will contain a collection of medical and surgical instruments and apparatus, drawings, portraits, books and manuscripts, illustrating the history of the art of healing.

BIBLIOTHEQUE NATIONALE, PARIS.—M. Carlos de Beistegui, a distinguished member of the Mexican colony in Paris, has jnst made a gift to the Bibliotheque Nationale of a fine collection of Alsatian coins and medals, formerly a part of the Meyer collection. They were about to be sold by the executors, and M. Babelon, director of the numismatological department of the Bibliotheque Nationale, was expressing his fears to M. de Beistegui that he would not be able to secure the treasure, when M. de Beistegui asked (says the *Journal des Debats*) to be permitted to make a present of the collection, as a testimony of his esteem for a country in which he had resided for the last thirty years.

BOSTON MUSEUM, U.S.A.—The twenty-sixth annual report of the Boston (U.S.A.) Museum of Fine Arts furnishes some interesting reading, especially as it includes a short history of the institution, which was begun in 1870 and opened to the public in 1876. For twenty years the museum subsisted on loans, but a series of munificent bequests has enabled it to make its own possessions more worthy of the city, and in several respects, especially Japanese art and classical antiquities, it now takes very respectable rank. During the last year the chief acquisitions have been a Velasquez, "Don Baltazar Carlos and his dwarf," a "Portrait of a lady," by Franz Hals, from the Stowe collection, and a valuable collection of Chinese porcelain, amounting to a hundred and one pieces, and made by Dr. G. O. Rogers during a thirty years' residence in China.

THE RHODESIA MUSEUM.—Among the many South African museums to which allusion has from time to time been made in the *Museums Journal*, that of Bulawayo has not yet occurred. This town, however, contains the beginnings of what promises to be a museum of much interest and value. It is now under the curatorship of Mr. F. P. Mennell, F.G.S., formerly of Victoria (Australia), who contributes to the August number of

the *Geological Magazine*, an account of several igneous rocks that he has collected in various parts of South Africa. The Rhodesia Museum has recently received from Mr. H. Marshall, Civil Commissioner at Bulawayo, an interesting carved stone bearing a Himyarite inscription, obtained by him in South Arabia. The arrangement and hieroglyphics are ascribed by Professor D. H. Müller, of Vienna, to the Sabaeans, who are by many writers regarded as the builders of the ancient ruins in Rhodesia. We understand that a scheme for new buildings, which shall contain both the municipal offices and the museum, is now in contemplation. While we hope that the museum will receive a house worthy of this enterprising town, we would warn the authorities that such a plan is not likely to allow the collections much opportunity for future expansion.

Anthropological Museums in Central Asia, by G. Frederick Wright.

[We extract from *Science* the following report of a paper on archæological and anthropological museums in Asiatic Russia, contributed to Section H. of the American Association for the advancement of Science, by the professor of geology in the Theological Seminary of Oberlin, Ohio.]

One of the agreeable surprises awaiting the American traveller in Siberia, is the evidence which he sees in every centre of population, of an intelligent interest in archæological and anthropological investigations. Indeed, there is scarcely a town of ten thousand inhabitants in all Siberia but has a public museum, under the care of a learned and competent curator, in which special attention is devoted to these subjects. There are such museums, finely housed, in the young cities of Vladivostok and Blagovestchensk; while in the older centres of population, the museums often rival anything which we have in this country outside Washington, New York, Boston, and Chicago. One of the finest of these museums is that of the branch of the Imperial Geological Society, which has been formed at Khabarovsk, the capital of the Maritime Province, on the Amur River. The museum of the Society occupies one of the largest and best-situated brick buildings of the city. Like all the museums in Siberia, it is largely devoted to matters of local interest. But an immense amount of both expense and pains has been devoted to its perfection and usefulness; and it is one in which all, both officers and people, take a just pride. The museum at Irkutsk is of still longer standing, and is enriched by the accumulation of well-nigh a century of intelligent exploration and research. The museum building in Irkutsk is also one of the finest in the

city. But perhaps the most interesting and important museum in Siberia is that of Minusinsk. Here, under the skilful guidance of Mr. M. Martianof, the principal druggist of the town, a museum has grown up which attracts anthropologists from Moscow, Copenhagen, and indeed all parts of the world. The museum is well housed in a large brick building. Other museums of much importance are to be found at Krasnoyarsk, Yeniseisk, Tomsk, Omsk, Biisk, Tashkent, and Tiflis. That of Tashkent is at the present time receiving valuable additions illustrative of the civilisation of the Græco-Bactrian kingdom, which followed the conquest of Alexander. The museum at Tiflis is one of the largest and best arranged of all in Asiatic Russia, and is fortunate in still having the benefit of the supervision of the distinguished botanist Radde.* All these museums are supported and have been mainly built up by private contributors. and are the object of much pride on the part of the people. Taken altogether, they represent an educational factor which is developed much more fully in Asiatic Russia than it is in America, and may well provoke our emulation.

* This museum was fully described in the *Report of the Museums Association* for 1898, pp. 175—183.—EDITOR.

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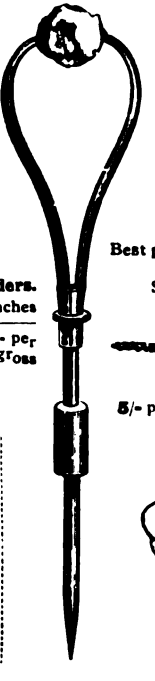

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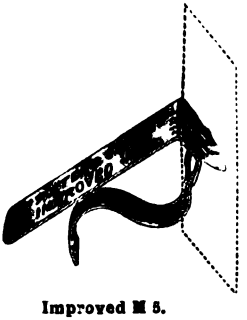

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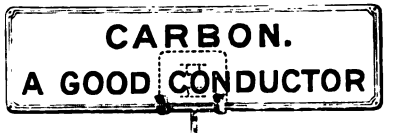

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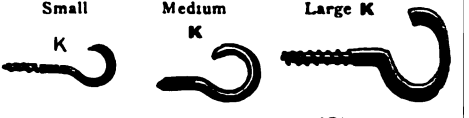

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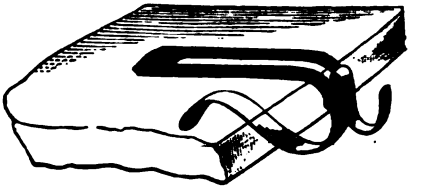

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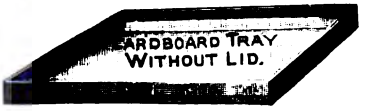

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The object of the Association shall be the promotion of better and more systematic working of Museums throughout the Kingdom. In order to promote a better knowledge of Museums, the Association shall meet in a different town each succeeding year.

That each Museum contributing not less than one guinea a year be a Member of the Association, and that individuals interested in scientific work be admitted as Associates on payment of 10s. 6d. annually.

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That each Museum belonging to the Association and each Associate receive one copy of the publications of the Association.

That a General Meeting of the Association be held annually, for the transaction of business, the reading of papers, and the discussion of matters relating to Museums.

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Some of the earlier volumes of the Report are nearly out of print, and Museums requiring complete sets should order them at once. Particulars can be obtained from the Secretary, Museum, Sheffield.

THE MUSEUMS JOURNAL.

Vol. 2. *October, 1902.* *No. 4.*

The Manchester Whitworth Institute.

IN July, 1890, the trustees of the late Sir Joseph Whitworth, desiring to establish a worthy monument to his memory in Manchester (as they were already doing in Darley Dale, near Matlock), proposed to found an institute to promote the development of commercial and technical education, and to stimulate the cultivation of taste and a knowledge of the fine arts,—and procured its establishment under a royal charter of incorporation.

The Whitworth Institute was formerly inaugurated on July 17th, 1890. The sum of £140,000, together with the park of 21 acres, and the funds necessary for laying it out as a woodland park and pleasure ground, was presented by the trustees, and augmented by a gift of £43,000, being the surplus funds of the Manchester Jubilee Exhibition of 1887. An excellent initial collection of engravings had been formed, to which had been added a few selected casts of note, and several paintings, including the gift of Mr. G. F. Watts of his great picture "Love and Death." Sir Charles Robinson was good enough to allow the purchase of his own representative selection of antique, mediæval and renaissance textiles, including various tapestries and embroideries, church vestments, woven fabrics, and gold and silver tissues from Italy, Spain, France, Germany, India, and Ancient Egypt.

The objects of the Institute are clearly stated in its statutes, *i.e.*:

> "The collection, exhibition, and illustration of works of fine art, and the study of and instruction in fine art, by means of galleries, libraries, lectures, classes, and other methods.

"The encouragement of the prosecution, by competent students of either sex, of their studies in the Institute, or any department of it, or in other places of education, by means of exhibitions, scholarships, grants, or any lawful means whatsoever.

"And, under such conditions as may be arranged, to take over and manage, or to give assistance in or to any Institution carried on by other persons, or in other places, for all or any of the above purposes, with power to lend to any such institution any of the works of art, or any object belonging to the Institute."

"Also to provide and maintain a woodland park and pleasure ground for the use of the public, in connection with the Institute."

The original idea of the founders of the Institute was to include the Manchester Technical School and its School of Art in its larger scheme of artistic and technological education, and the needful transfers of those schools, with their endowments, were effected in 1892. Later, however, the two schools were handed over to the Technical Instruction Committee of the Manchester corporation, in furtherance of the idea of its great Municipal School of Technology. The Institute was thus left free to work at the fine arts alone.

In 1893, three spacious picture galleries were erected (augmented by two well lighted basement rooms), and the collections have since been supplemented by judicious purchases, and by many generous gifts. They now comprise a permanent exhibition of water-colour drawings by deceased artists, illustrative of the history, progress and development of water-colour painting in Great Britain; a few fine oil-paintings; a series of high-class engravings, and the commencement of a museum of sculpture and statuary. There is a small library of books on art subjects, and every facility is provided for those who wish to read, or to copy the pictures and statuary exhibited. There can be no doubt that the noble gift of the Institute and its park are well appreciated and used by Manchester people and others from a distance. It was the council of the institute that set the example in Manchester of music in parks on Sunday afternoons, a plan now so effectively developed by the corporation, and an attendance of 16,000 on one afternoon shows that this departure is thoroughly appreciated. A want is evidently

supplied also by the scholarly lectures on art subjects which were inaugurated in 1898, and at which the attendance has been steadily growing. Lectures have been given by Mr. Noel Johnson on "The early History of Water-colour Painting," on "Man and Nature in Art," on "Imagination and Realism in Art;" by Mr. Whitworth Wallis on various art subjects; by Mr. J. E. Phythian on "English Painters;" by Mr. Carl Armbruster on music; by Mr. W. E. Hoyle on "Animal Form in Relation to Art;" by Professor C. H. Herford on "Nature in English Poetry."

Amongst other special collections may be particularly mentioned three series of admirable reproductions of a large number of characteristic paintings in the National Gallery, the museum of the Prado in Madrid, and the Hermitage in St. Petersburg. Also a fine series, well displayed, of the Arundel Society's copies from Italian paintings.

The last report of the council records with satisfaction the continued interest of the public in the exhibition. The arrangement of the collections has been continuously improved, and many interesting additions by donation and purchase have been made.

The galleries and the "Woodland park and pleasure ground" and the lectures are all open to the public without charge.

The Descriptive Arrangement of Museum Collections.

By Frank Collins Baker, Curator, the Chicago Academy of Sciences.

[Paper read at the Bradford Conference, 1902.]

In the *American Naturalist*, for April, 1900, the writer published a description of a new museum tablet. As this tablet has been in satisfactory use for nearly three years, it may be of interest to the members of the Museums Association and to my fellow curators to know the result of its practical application, and also to bring the subject up to date, as some additions and corrections have been made since the publication of that article.

The tablets are made from No. 20 binder's board, which is quite heavy enough for all practical purposes. About the edge of each tablet is bound black gummed paper, similar to that used for binding lantern slides. The background for the specimens is made from Star Manilla cardboard, of the thick- of one-half a millimetre: this cardboard is the same as that which is used for herbarium genus covers, and is of a rich yellowish cream colour. The manilla cardboard is cut so much smaller than the tablet as to leave a border of black three millimetres wide all the way round, and it is attached to the tablet by gluing the sides of the cardboard, and then putting the tablet under some heavy pressure, as a piece of iron or sheet lead. The writer would emphasize the fact that the cardboard must be gummed *only* on the narrow margin at the edge, for if the whole is covered with glue the tablet will warp badly. This has been learned by experience.

In the article above referred to, it was recommended that those tablets desired for very light or white specimens have a

[illegible] Descriptive Arrangement of Museum Collections.

By [illegible], Curator of the Chicago Academy of Sciences.

Read before the Association, [illegible]

IN the *Popular Science Monthly* for March, [illegible] the writer described a method of mounting insects which he had found satisfactory for nearly three years' use in the museum of the Chicago Academy of Sciences, and which, from the favorable comments of correspondents to whom the secret of its preparation was confided, and the success which has attended its use in the museum, has been pronounced by competent judges the most satisfactory method yet devised.

The tablet is made of [illegible] pine, which is soft enough to pin well, yet firm enough for all practical purposes. The [illegible] tablet is lined with black grained paper, [illegible] binding [illegible] sides. The backs and sides are made from [illegible] Manilla cardboard. The thickness of the tablet is [illegible] inch. Its width and length is the same as those used for [illegible] museum cases, and is of a convenient size for [illegible] Manilla cardboard is cut [illegible] the tablet to leave a border of black [illegible] all the way around. The tablet [illegible] tray [illegible] and then [illegible] under [illegible] pressure [illegible] of [illegible] The cork [illegible] the fact that [illegible] [illegible] [illegible]

CASE OF ECHINODERMS IN THE MUSEUM OF THE CHICAGO ACADEMY OF SCIENCES.
(Kindly lent by the Academy.)

black centre pasted over the manilla cardboard, leaving a light border around this centre by cutting the paper six millimetres narrower and shorter than the size of the cardboard. An experience of nearly three years has shown that the tablets with black centres are liable to warp on account of the large amount of moisture necessarily used in pasting on the black paper. About six months ago the writer caused several electrotype blocks to be made of the required sizes, and from these the black centres were printed directly upon the manilla board, in the printing office of the Academy. This has proved a complete success, the centres being uniformly black and this method, of course, doing entirely away with the use of paste. They cannot be printed successfully at a printing house, for the reason that the pressmen will not give the matter the time and trouble necessary to produce good, black centres. To be neat in appearance the black must be jet black and not gray black.

The sizes used, which have proved to be entirely satisfactory, are 3×2, 3×3, 3×4, 3×6, 6×6 and 9×9 inches. For subgeneric labels a tablet 3×1 inches is used, and for sections or smaller groups a tablet $3\times\frac{1}{2}$ inches. In the case of the generic and section tablets the edges are covered with black paper and the printed label is pasted directly on the tablet. Genera and higher groups are printed directly upon the manilla cardboard and placed in a standing position in the back of the case. The specimens are attached to the tablets with wax or glue.

It has been urged by many museum men, particularly my good friend Dr. Meyer, Director of the Dresden Zoological Museum, that iron tablets are preferable to cardboard on account of their durability, and the cost has been stated to be about the same. I have carefully figured the cost of iron and of cardboard and find the former to be much in excess of the latter. I tabulate below the cost of 500 tablets of cardboard as manufactured in the Museum of the Chicago Academy of Sciences, and of 500 iron trays, the latter as quoted by Herr Anton Reiche, of Dresden. The latter are used in the Dresden Museum.

Iron Trays.	£	s.	d.
50 × 50 mm., per 100..	0	5	3
75 × 100 ,, ,, ..	0	8	3
75 × 150 ,, ,, ..	0	10	6
150 × 150 ,, ,, ..	0	15	6
200 × 300 ,, ,, ..	1	12	0
Total	3	11	6

Cardboard Tablets.	£	s.	d.
75 × 50 mm., per 100..	0	3	0
75 × 100 ,, ,, ..	0	3	6
75 × 150 ,, ,, ..	0	4	5
150 × 150 ,, ,, ..	0	6	0
225 × 225 ,, ,, ..	0	10	0
Total..... .	1	6	11

The actual cost to the Academy is much less, being simply for material, the labour being performed by the young man in charge of the check-room, at times when he is not busy taking care of parcels, so that 500 tablets would require a cash outlay of but 11s. It is obvious from the above facts that iron is totally out of the question for museums of limited means, and that the cardboard tablets are especially adapted to this class of museums. As to durability, there is no reason why the cardboard tablet should not last indefinitely with ordinary care. A trial of three years has shown conclusively that the tablets do not warp, that they are not influenced by light to any great extent, and that they are thoroughly practical for installing any of the invertebrata.

These tablets are not, of course, intended for use anywhere except in the exhibition cases. For the study series, in drawers beneath the cases, the writer uses a good cardboard tray covered with black paper, which may be procured in assorted sizes at 32s. per 1,000. The sizes used are 3 × 2, 3 × 3, 3 × 4, 3 × 6, 6 × 6 and 9 × 9 inches. For the generic and subgeneric labels an inverted tray 1 × 3 inches is used and for sections an inverted tray ½ × 3 inches.

In this connection the writer desires to urge upon his fellow-curators the importance of a printing press in a museum. The old method of using hand-printed or written labels giving simply the scientific name, locality, and donor, must gradually give way to the use of printed labels giving all possible information about the specimen or group of specimens. The museum of to-day, if it would achieve the greatest good, must be, as described years ago by the late Dr. G. Browne Goode, "a collection of well-expressed, terse labels, illustrated by a few well-selected specimens." The museum should be, in

fact, a gigantic encyclopedia of the subjects upon which it treats.

A printing press and outfit large enough for any but the largest labels can be purchased for about £15, and any assistant of ordinary intelligence can learn to print any kind of museum label. In the Chicago Academy of Sciences the printing department has turned out about 50,000 labels in three years, ranging in size from 1 × 3 inches to 8 × 10 inches, and embodying a diversified variety of type.

The writer's system of installation is to arrange the specimens in natural groups, indicating the proper sequence of families, genera and species, and to insert here and there in the series a note telling some important systematic or economic fact, a figure of the gross anatomy or of the animal in life. The family label is printed so as to give the principal diagnostic characters of the group, as well as its geographical and geological distribution, its range in depth (if a marine animal) and the number of species, recent and fossil. Surmounting the case, on either side, is a label in a frame 8 × 10 inches, which diagnoses the order or large group to which the species in the case belong, while over the center of the case is placed a label 12 × 24 inches, which figures and describes some striking fact, as the geographical distribution of coral reefs, the embryonic development of the starfish, or the sponge fishery.

The writer has been pleased to note that the public, including the educational forces of the vicinity, have been quick to note the change from the old to the new method; visitors have been seen to spend but a few moments examining cases installed by the old method, while a case containing some interesting material, such as sponges, corals, or illustrations of the pearl button industry, will be pored over for several hours, which fact conclusively proves that the addition of carefully prepared descriptive labels is absolutely essential to the success and usefulness of a museum. The figures accompanying this article show the writer's method of installation.

In conclusion, the writer would urge upon his fellow-curators, both at home and abroad, the betterment of their

collections in the matter of installation for the public, that the museum in the first place may be a source of real information to both the student and the lay visitor, and in the second place that the stigma that rests upon so many of our museums that they are known to the public as a "collection of musty old bones" may be removed. It is toward these ends that the writer of this article is working.

In addition to samples of the card tablet, in all stages of its manufacture, the following photographs were exhibited by Mr. Baker in illustration of his paper :—

1. View of building, shewing its isolation in Lincoln Park.
2. Nearer view of building. *(Museums Journal, Vol. I., pl. ii.)*
3. Interior view from gallery. Insects in rail-case. *(Tom. cit., pl. iii.)*
4. Case of Echinoderms, shewing descriptive arrangement. One door open, shewing installation of study series. These fronts lift out, and are more convenient than swinging or sliding doors, because they are never in the way. They also serve as doors when placed across the alcove, and keep the public away when work is being done in a case. *(Pl. ii. of this Vol.)*
5. A diagnostic label over Echinoderm case. Each one is framed and attached to the case back to back by an iron elbow, thus, L.
6. Large label over entire centre of case, describing and illustrating development of sea-urchin.
7. Interior of case containing Silurian fossils, shewing use of card-board tablet.
8. Drawer of fossils, shewing arrangement of study series in trays.
9. Interior of case of Mollusca, exhibiting Pelecypod dynamics.
10. Interior of case exhibiting Gastropod dynamics.

Notes upon the Haslemere Educational Museum.

By E. W. Swanton, *Curator.*

In July, 1893, Professor Jonathan Hutchinson, F.R.S., delivered an address upon Educational Museums before the members of the Museums Association at the annual meeting held that year in London. He stated that the object of his paper was to advocate the formation in all towns and large villages of collections of objects suited to facilitate the acquisition of general knowledge. Since that time the ideas he expressed in that address have been carried out to a greater or lesser extent at his educational museum at Haslemere in Surrey, and at Selby in Yorkshire. It is gratifying to record that the scheme and arrangement adopted at Haslemere have been followed at the museum at Sexey's Trade School, Bruton, Somerset, and elsewhere.

I propose in this paper to give a general description of the educational methods in use at the Haslemere Museum.

It had its origin in a wooden building attached to Mr. Hutchinson's residence at Inval, about a mile from the town of Haslemere. Here the professor often gave free lectures and addresses on Saturday and Sunday afternoons.

This building soon became too small, and others of a similar kind were added. Within a year or two Mr. Hutchinson built the present museum in the town of Haslemere. The library was added at a later date. The Haslemere Museum is built entireiy on the ground floor, and is of wood.

The subjoined statement as to cost is copied from the Government Educational Report, 1898, in which a full description is given.

Descriptive Arrangement of Museum Collections.

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going, very little dust gets into them. The heating apparatus —a plain coke stove within the building—is not at all to be commended; it generates dust and dirt, and moreover is a source of danger in a structure built entirely of wood. There are fire extinguishers and a good water-supply in each room. The museum is very seldom open after dark.

The table-cases to the left contain examples of the invertebrates, arranged in zoological sequence. Care has been taken to exhibit fossil forms side by side with their modern representatives.

The very large skull of the Indian elephant is believed to be unique. It had but one tusk: a portion of the alveolus has been sawn through to shew the complete suppression of the other. The tusk of this skull, with those of the African elephant adjoining it, have been artificially supplied.

One case is always set apart for recent additions to the museum, and another for objects not identified. In the naming of the latter, help is solicited from visitors, and much valuable assistance has been received.

Two years ago an interesting experiment was carried out, with a view to increase the interest of the children of the district in the exhibits. A series of questions of a general character in relation to natural and human history was prepared and issued in pamphlet form, 20 on each page. There were 10 pages, 200 questions in all. On each page were two questions of a practical nature. In connection with these a large series of specimens, also portraits of famous historical characters were arranged upon a table in the museum. All were without names, but duplicate specimens and portraits with names and descriptions were on view somewhere or other in the museum. The question papers were issued at a nominal charge of one penny for the set. The answers could be obtained in whatever manner the student thought fit, but a check upon mere cramming was provided in the compulsory answering of the two practical questions, when some half dozen specimens and portraits were required to be named. The examination was not competitive; every child who passed was allowed to choose a book

from a series set apart for the purpose. Much interest was evinced in the scheme, children of all classes taking it up eagerly, and more than 50 succeeded in passing. The age limit was from 10 to 16 years.

The chief feature of the historical gallery is the space-for-time arrangement of the centuries. The illustration renders explanation needless. Forty centuries—taking us back to the Hyksos or Shepherd Kings—are thus shewn, a space of 18 inches in width being devoted to each century. At the Selby Museum the larger space available allows for the exhibition of fifty centuries, *i.e.*, from the XI. Egyptian Dynasty onwards.

The illustrations, models, coins, &c., are not constant, but are removed from time to time, and a fresh series exhibited.

A large number of swing frames are in use. These for the present contain part of the letterpress and illustrations of H. N. Hutchinson's "Living Races of Mankind."

The geological gallery is about 120 feet long, and open on one side—a serious defect, for many specimens suffer from the effects of the winter frosts and storms. The following explanatory label is fastened up in a conspicuous place :—

This gallery is devoted to the arrangement of geological specimens on the space-for-time method.

The objects in view are three-fold :—

I. To aid the imagination in realising the immense periods of time which have elapsed since the commencement of the formation of the earth's crust.

II. To convey some idea of the relative length of the several stages into which those periods have been classified.

III. To bring into clear prominence the brevity of the period with which human history deals, as contrasted with that concerned in the whole zoological record.

The age of the world is here represented as 35 million years ; a very low estimate indeed (see note upon the "Thickness of the Earth's Crust"). The wall space is divided into 35 equal divisions each of which represents a suppositionary period of one million years. It must be clearly understood that this is approximate time only ; the present state of knowledge does not permit us to assign definite periods of time to the changes in the formation of the earth's crust.

The number of spaces alloted to each period is determined by the known maximum thickness of its strata; appropriate fossils with explanatory labels are placed under each.

The modern objects which find a place on the top shelf, are intended to emphasize the sequence of life, and also to mark clearly the predominating groups during certain epochs. The very short period—geologically considered—during which man has existed upon the earth is especially noteworthy. Immediately below the explanatory label above quoted is the following one.

THICKNESS OF THE EARTH'S CRUST.

According to Ramsay the groups of fossil-bearing strata in England have a thickness of nearly 14 miles or near 73,000 feet.

The Tertiary are only	2,240 feet.
The Secondary	13,190 ,,
The Paleozoic	57,154 ,,

Thus allowing 1,000 feet or fifth of a mile to a million years we have—

For the Tertiary	2,250,000
For the Secondary	13,000,000
For the Primary	57,000,900

Professor Haughton estimates the thickness of the stratified rocks as 177,200 feet or more than 30 miles, and the duration of time as 200 millions.

Geikie states that geological evidence indicates a period of not much less than 100,000,000 (one hundred million) years since the earliest forms of life appeared on the earth.

Dr. Croll says not less and possibly much more than 60 millions.

Sir William Thompson (now Lord Kelvin), basing his argument chiefly upon such data as the age of the sun's heat and rate of cooling of the earth, has tried to discredit the enormous periods claimed by evolutionists, but still grants about 100 millions.

By the expression "Geological Time" we mean the period during which living things can be proved to have existed on the surface of the planet, and sedimentary rocks, including their remains, have been in course of deposition.

This schedule has been occasionally criticised, but its utility in conveying to the popular mind some idea of the immense periods of geological time cannot be too strongly insisted upon.

It may interest readers to know that the series of fossils arranged in the natural history room contains some of the

specimens used by Parkinson in illustrating his "Organic Remains."

The vivarium is a shed attached to the museum. It is open on two sides, and has an aviary at one end, containing a few British birds—owls, magpies, &c. This department has always proved to be one of the greatest attractions. The flower-stands afford room for 120 specimens, with descriptive labels. During the summer months these are always full. Zinc cylinders, of 1 inch diameter, and varying from 4 to 6 inches in depth, are used to hold the water. Usually the flowers will remain fresh for a week, though in very hot weather certain species require to be renewed upon the third or fourth day. An open shed is certainly the best for a vivarium of this kind. The botanical specimens keep fresh for a much longer period than when kept indoors, and the exhibits generally are secured an even temperature approximating to natural conditions.

I may remark that no attempt is ever made to provide botanical rarities for exhibition: common wild flowers only are shewn. Occasionally, through the kindness of friends who have visited the museum, very local specimens from other districts are placed on view; but the chief aim is to shew such examples as are of common occurrence in the Haslemere district. In autumn a large series of fungi are shewn. The fungus flora of the greensand around Haslemere is of an exceptional character.

Mosses are exhibited in saucers during spring. Bell-glasses contain newts and frogs in various stages of development. In summer there are usually some reptiles to be seen. Insects are bred all the year round in appropriate breeding cages. The cage shewn in the illustration contains larvæ of the puss moth, and above it a large coloured drawing depicts the various stages in the life-history of that moth.

The illustrations in the frames (false back) are changed monthly; those on view always relate to objects of special interest which commonly occur during the month in question. Microscopes are in use when some responsible person is in attendance. Nothing is admitted to the vivarium unless it bears a distinctive label.

The library is a long wooden building, lighted from above, and having a corrugated iron roof; such roofing is not desirable because of the great heat during summer. The bookshelves, to hold 6,000 volumes, are not arranged round the building, but crossways, dividing it into seven compartments. Busts of celebrities, coins, medallions, &c., are plentifully shewn. The frames contain, for the most part, portraits, which are frequently changed by the librarian in charge, who has a large classified series kept for the purpose in portfolios. There are also a few good paintings

The library is much frequented on Sunday afternoons.

Professor Hutchinson in the paper alluded to, remarked that the special features which should characterise an educational museum were :—

I. The liberal use of pictorial illustrations.
II. The plentiful introduction of models and busts.
III. Descriptive labels, free from pedantry.
IV. Inexpensive reference-books for the use of visitors.
V. A museum catalogue.
VI. Free handling of inexpensive specimens.

With regard to the first of these, the museum is very liberally supplied with pictorial illustrations. The frames are all provided with false backs, so that to change an illustration takes only a few minutes.

In botany, coloured illustrations are of special educational value, and very attractive, often more so than the original, if the latter is not obtainable in a living state.

The botanical arrangements at the Haslemere Museum, as regards the study of the native flora, are of a threefold character. In the corner devoted to local objects there is a herbarium. The plants are arranged under their separate orders in drawers in a large cabinet; the classification and nomenclature being that of the ninth edition of the London catalogue.

The botanical section contains a series of coloured plates from the first edition of Sowerby's "English Botany," 1799; and as already stated, the wild flowers of the district are on view in the living state in the Vivarium. Of the three

arrangements, the Vivarium is the most attractive, next to that the illustrations from Sowerby, whilst the herbarium, though always accessible is seldom consulted, and then solely by critical botanists.

The swing frames are of plain oak, and measure 28 × 18 inches. They are supported on octagonal deal pillars, three to a pillar, or two if a corner frame. The other frames used in various parts of the museum are 20 × 17 inches in size. All were supplied at a very moderate cost.

In the local corner are frames containing illustrations from Cassell's "Familiar Wild Birds," representing the birds of the district.

Of models and casts there is a large series, *e.g.*, the egg of the Great Auk, and that of the Æpyornis, several geological casts, and many busts in the history room and library.

In the matter of labels, great endeavours are made to live up to the maxim that an educational museum should consist of a "well illustrated series of labels," though of course the museum cannot claim to be perfect in this direction. The plan of grouping a series of objects of a similar character in one case with a common label has been found of great educational value. More than two hundred labels of a descriptive character have been printed. They are compiled from various sources. A few are copied direct from labels in use at the Natural History branch of the British Museum. Sets of these labels have been prepared, and through the generosity of Mr. Hutchinson any curator may have a complete series upon application to me at the museum. The cost of postage should be refunded.

Inexpensive reference-books are placed here and there, and are often consulted by visitors. Under the space-for-time arrangement of the centuries in the historical gallery, copies of Professor Hutchinson's book, "The Centuries," are placed. This work was specially prepared for use with the scheme. There is also an English translation of the Koran, a facsimile of the Domesday Book relating to Surrey, and many other appropriate books and historical charts.

In the botanical division, Bentham's "Flora" is placed for use; and Wood's "Common Objects of the Country," Catherine Hopley's "British Reptiles," Adler and Straton's "Alternating Generations," and many other popular books find a place in various parts of the museum.

Certain publications may also be consulted, as the *Journal of the Board of Agriculture*, the *Journal of the Royal Geographical Society*, the *Naturalist's Journal*, and *Nature*.

Up to the present no attempt has been made to issue a museum catalogue, such seeming scarcely necessary where the exhibits are for the most part provided with labels of a popular character.

Previous to the preparation of the series of labels now in use, copies of the guide-books to the various departments of the British Museum were cut up, and a very useful series of labels were thus obtained. Many of the illustrations from these guide books are always in use. This inexpensive method of obtaining labels might be recommended to the authorities of many provincial museums where labels are conspicuous by their absence.

As regards the free handling of inexpensive exhibits, there are but few objects now on view which are not secured in glazed cases. Exceptions are the fossils in the geological shed, and the various objects used in the children's examination. When the museum was first opened very few cases were locked, but it was found advisable as the collections increased in number and value to secure the majority with lock and key. This was done not so much from fear of pilfering, as to safeguard the arrangement of exhibits, as visitors rarely replace an object exactly in the place from which they take it, and mischievous boys sometimes delight in transferring articles from one case to another, thus causing considerable confusion.

Visitors to the Haslemere Museum are requested to write their names in a book, but the number cannot be accurately determined by this means. However the attendance is a large one, especially during the summer months, when there is a large influx of visitors to the town.

The museum is well known in the district, and is frequently visited by schools from a considerable distance. In one or two instances the children save up money for the railway fare, and pay an annual visit under the charge of a teacher, an excursion which is always looked forward to with delight.

Classes for local children are held throughout the year, usually three times a week. Children attend from all the schools in the immediate neighbourhood.

Attention is always paid to the wants of teachers, and many specimens are loaned for school classes.

During one summer Mr. Hutchinson gave Saturday afternoon demonstrations to the Board School teachers. These were well attended and much appreciated.

The Sunday afternoon lectures are an important feature of the Haslemere museum. These are given chiefly in the summer, but their popularity has been so great, that during the past two years a spring and autumn series have also been arranged. Weather permitting, the summer series is always given out of doors.

Methods of Collecting Anthropological Material.*

By Harlan I. Smith,

American Museum of Natural History, New York.

THERE are at least three distinct methods of collecting anthropological material that have been followed by the museums of this country. They aim chiefly at two totally different results,—first the increase, and second the diffusion of anthropological knowledge. Two of these methods may be defined as systematic efforts to produce these results.

The first method is a systematic attempt to secure material upon which to base original research that will result in the

* Presented at the Joint Meeting of the American Anthropological Association and Section H, Anthropology, of the American Association for the Advancement of Science, July 2nd, 1901.

increase of knowledge. This may be called "research collecting."

The second method is an intelligent and aggressive attempt to provide specimens to systematically illustrate known anthropological facts or to diffuse existing knowledge. This may be called "synoptic collecting."

The third method is simply the amassing of a collection of objects which may be found casually, or which may be presented for preservation by persons not a party to any systematic effort or plan of the museum. This may be called "the preservation method."

Research collecting can be best carried on by the larger museums unless limited, for instance, to provincial areas; and the best results are attained by entrusting the work to individuals who will devote a considerable time to it, and not only amass material for research, but master the existing knowledge of the subject and carry on the original investigations, so that they become authorities on the areas and subjects attacked.

Secrecy regarding the fields, applied locally and toward populations having vandalistic tendencies, may be advisable; but for economical reasons it is best to inform the entire profession of the areas and subjects being or about to be investigated. In this way unnecessary duplication of work, such as might happen if secrecy were employed, is avoided, and the energy of colabourers is reserved for some of the many other problems of original research awaiting attention. Such publicity, within the profession, should never cause loss to science, or raise the fear that sister educational institutions or honourable brother investigators will usurp the fields and subjects already being properly worked.

Parties who follow the research method may usually be made up advantageously of people native to the fields of research, and who know the country, its climate, customs, roads, &c. The scientific head may, of course, be an exception to this general rule, as also may be a photographer, cast-maker, or other special worker, in cases where the leader is unable to perform such duties.

The leader of such a collecting party should have charge of the unpacking, cataloguing, publication of the results of the research, arrangement of the specimens for exhibition as evidences of the newly discovered facts, and labelling of the research collections. The arrangement and labelling may often be facilitated by following the order and legends of the publication, or at least such reports should be referred to.

Research-collecting parties naturally must secure many specimens of each kind, and in some cases as many specimens as can be found. This is necessary to eliminate the element of chance or luck in finding evidences, and also to enable the student to determine the average type as well as to note exceptional objects, and for the study of variation. In the case of osteological specimens, this feature is of especial importance.

The publications, and specimens arranged with labels, which latter are needed as evidences of the increment of knowledge, constitute a synoptic collection illustrating known facts. After such a collection is completed for the institution financing it, the great mass of duplicate specimens may serve as a store from which to draw to supply sister educational institutions with synoptic collections for the diffusion of existing knowledge.

Synoptic collecting may be carried on by any museum, and may be either limited to provincial areas and few subjects by small institutions, or unrestricted by large ones. It naturally appeals to a greater number of people than the research method, as it serves to illustrate by actual objects the things shewn by pictures in text-books and other general publications. The best results are attained by enlisting the services of research collectors, who, being authorities, can select the best available specimens and avoid the expenditure of funds on other than typical material. If the illustrative specimens can be secured from among the duplicates of a research museum, the expenses of a trip to the field may be saved, thus a considerable sum can be reserved which may be used for securing a more extensive series, or a synoptic collection of some other subject. From the synopsis of the original research collection the method of arrangement may be copied, thus saving the useless labour of working it out again; and

labels may be quoted, or possibly even secured, from the duplicates kept for replenishing soiled labels in the research collection.

In case any specimens which can not be obtained by this method the services of dealers may be enlisted; but if many specimens are required, a field trip will usually be more economical, especially if an experienced research collector can be secured to do the work on an economical side trip or even on a main trip. In nearly every case the labelling, which should be insisted upon, will give greater satisfaction if done by the research collector. Such a collector will often be glad to make a synoptic collection while on a research trip, so as to divide the financial burden of the expedition. Intelligent persons native to a region, from which specimens are sought, may often be engaged to secure them at a reasonable expense, especially if they may do the work supplementary to their regular vocation.

The third method may diffuse or even increase anthropological knowledge or it may do both; but, it may be dismissed by the mere statement that, not being a systematic attack to produce such a result, it proves of any value only by accident. Its only commendable feature is, that occasionally it may be a means of preserving valuable objects that otherwise might be lost to the world.

It is evident, that for economy, efficiency, and accuracy in diffusing knowledge, the synoptic method of collecting should be replaced as far as possible by a method of exchange between institutions desiring synoptic collections and those making research collections. In many cases research museums can well afford to present synoptic collections, made up from the duplicates of their research collections, to the smaller museums, which are widely distributed, and thus able to widely diffuse the knowledge gained by the research museum.

The research method of collecting is certainly of the highest type, as it not only advances knowledge, but, with exchange, correspondence, and co-operation between museums, may furnish all the material results produced by the other methods.

The Collecting and Preparing of Fossil Vertebrates.

THE *Compte-Rendu* of the eighth International Geological Congress contains a short note by Professor H. F. Osborn on the precise methods now in use in America in the study of the fossil vertebrates of the United States. These methods are, first, those employed in the field, in the actual collecting of the fossils. It is most necessary to note, on the spot, all the geographical, geological, and biological relations of the bed in which the fossil is found; the exact height at which it lies in the stratum is a point of no small importance; and it is essential to note the exact position in which the different parts of an animal are lying. Then the first thing to do is to attach to the specimen either a provisional number or, if possible, the final one which it will bear in the museum, the name of the finder, and the date of packing. A note is also made of the locality, the stratigraphical horizon, and the lithological character of the matrix. Lastly, a photograph or series of photographs of the remains *in situ* should be taken.

Next come the methods of packing. So far as possible, the specimens are taken away encased in the matrix, in one or more blocks. To attain this, parts of the surface of the bones are exposed in the bed itself, and they are several times soaked with gelatine. Paper or fine muslin is then glued on the surfaces thus exposed. This is then covered by strips of linen of various sizes soaked in plaster, which consolidates the whole. Gradually the sides and then the lower surface of the blocks are exposed, and similarly wrapped in plastered rags. When the whole block is isolated and consolidated, it is surrounded by laths and cords. Thus it is possible to pack in cases, and to transport without any damage, blocks of friable stone weighing from fifteen hundred to two thousand pounds. This method is particularly advantageous for friable bones, or those which are much shattered in beds of cleaved clay. Care should be taken to collect and preserve all the fragments strewn about the locality, by washing and methodically

sorting the quarry rubbish. Wortman thus succeeded in reconstructing the complete dentition of *Palæonictis occidentalis*.

Thirdly come the methods of arrangement in the museum. The first care is to substitute for the number on the specimens as they arrive the final registration number, which should be placed on every fragment of the fossil. In the American Museum of Natural History the specimens are laid in pigeon-holes arranged in glass cases, and of such dimensions that they can always be moved and re-arranged in the cases. They are in such order that any specimen sought can be immediately found among the ten thousand specimens that the museum contains. The catalogue is made of slips, one set classed geologically and the other zoologically.

Lastly, Professor Osborn deals with the methods of preparation. The coat of plaster which covers the fossils is easily removed on their arrival by moistening the mass, thanks to the layer of paper or muslin that separates it from the fossil. If the blocks containing fossils are split, they are solidly cemented in such a way that the fossil when worked out is firmly joined together. The fossils are developed by the chisel, the graver, the needle, and the dental engine. When the fossils are small and the rock very hard, a dental engine worked by a small motor may be used with success.

In the system of mounting adopted, all the pieces are always removable, or at least accessible to the student. When a bone is restored or mended by coloured plaster, the boundary of the re-constructed portion is always indicated by a coloured line. When any bone in a skeleton has been borrowed from another individual, it can always be recognised by its different registration number. Isolated bones, or those without any number of registration, are marked with O. The only bones not numbered are those of skeletons in which all bones come from a single individual, which has its own number.

The paper is illustrated by two plates showing the mounted skeleton of *Protorohippus* and a restoration of the same animal as it may have appeared in life.

General Notes.

WANTED (?) A ROYAL MUSEUM.—The statement that the King intends to deposit Queen Victoria's Jubilee presents in the Durbar Room at Osborne reminds a correspondent of the *Daily Chronicle* that "there is in Berlin a museum which contains exclusively articles of interest associated with the Royal family of Prussia, from cradles to coronation robes." He considers that a museum established in London to exhibit the Jubilee presents, as well as the addresses presented by our colonies to the Duke of York, would be of popular interest to the public. Such a museum might contain other articles of personal association with our sovereigns. He suggests that the Imperial Institute would afford a fit home for these collections.

MUSEUMS AND FIRE-RISKS.—It is curious that our paragraph on the Soane Museum in the last number of the *Journal* should have appeared just before the public interest in this museum was aroused by the narrow escape which it had from being destroyed by fire, on the night of 27th September. Mr. Richard Wright took the opportunity of calling attention in *The Daily Chronicle* to the need for the isolation of museums, a need which, as our readers will remember, has been strongly emphasized of late by Dr. A. B. Meyer. Our chief London museums are fairly well isolated, and the Government has begun the work of isolating the National Gallery. The adjoining house is being pulled down, but the barracks still remain as a source of danger. The Museum of Practical Geology too, as we have previously pointed out, is not merely in a street of old and inflammable houses, but many of its collections are themselves stored in rooms that are the reverse of fire-proof. It is to be hoped that the attention of those responsible will be aroused to this important question.

THE ROYAL SOCIETY'S COMMISSION TO MARTINIQUE AND ST. VINCENT.—Owing to various unforeseen delays, our paragraph on the volcanic eruptions at St. Vincent must have appeared somewhat antiquated to our readers. Long before the publication of our last number, Dr. Flett and Dr. Tempest Anderson had returned from the West Indies, and had communicated to the Royal Society their preliminary report which was published in the *Proceedings*. Our excuse for mentioning the expedition at all is that the material collected by it is eventually to find a home in the mineralogical department of the British Museum. We may take this opportunity of mentioning that the temporary exhibition at that museum,

illustrative of the eruptions, has received various presents of material ejected from the Soufrière of St. Vincent, as well as a set of photographs taken in Martinique and St. Vincent since the commencement of the eruptions.

AT HOME.

THE CURATORSHIP OF THE MUSEUM OF PRACTICAL GEOLOGY.—Mr. Frederick William Rudler, who for the last twenty-three years has been curator of the museum in Jermyn Street, as well as its librarian since the departure of the late Mr. Newton, retired from his post, under the age regulation of the Civil Service, at the end of September. Mr. Rudler's connection with the museum began in 1860, when he served as assistant to the then curator, Mr. T. Reeks. "For fifteen years," says *Nature*, in commenting on his retirement, "Mr. Rudler was actively engaged in the museum, acquiring an intimate knowledge of mineralogy and applied geology, and an expert knowledge of British pottery. He practically re-wrote the third and fourth editions of the 'Descriptive Guide to the Museum,' which was originally drawn up by Robert Hunt; and he almost wholly prepared the second and third editions of the 'Catalogue of Specimens of British Pottery and Porcelain.' In 1876 Mr. Rudler was chosen professor of natural science in the newly established University College of Wales at Aberystwyth. Here he was successfully occupied for three years, until, on the death of Mr. Reeks, he was besought by the late Sir Andrew Ramsay to apply for the post rendered vacant in the Museum of Practical Geology. Mr. Rudler's appointment was cordially assented to, and from 1879 onwards he has held office with increasing advantage to the institution, and to the many individuals who have constantly sought his advice. It is not too much to say that one might search the world over and fail to find anyone with a fuller knowledge of the subjects that have been connected with the Library and Museum of Practical Geology, or one who was more ready at all times to give to others the benefit of varied and accurate information." We understand that the double post of curator and librarian has been filled by the appointment of Mr. John Allen Howe, B.Sc., who recently left the Royal College of Science for a post on the Geological Survey. As Mr. Howe appears to be quite a young man, without notable experience of either museum or library work, he is to be congratulated on obtaining this important post with a salary commencing at £300 per annum and rising to £500.

SAY'S TYPES OF MARYLAND MOLLUSCA.—"Travels in South Kensington" was the title of an interesting book on the collections of what is now known as the Victoria and

Albert Museum. Some day we may, perhaps, see a book called "Fossil Collecting at South Kensington," and describing the exhumation, from under the dust of ages, of long-forgotten but remarkable specimens. The thought is suggested by a little paper recently contributed by Mr. R. B. Newton to the *Geological Magazine* (n.s., dec. iv., vol. ix., pp. 303-305), in which he announces his discovery of many of the original specimens, on which Thomas Say, in the year 1824, based his description of various species of the Tertiary Mollusca of Maryland. In his paper, which was published in the *Journal* of the Academy of Natural Sciences of Philadelphia in 1824 (vol. iv., pp. 124-155, pls. vii.-xiii.), Say described forty-three species. The type-specimens of twenty-one of these have lately been found by Mr. Newton in the large collection of foreign Tertiary Mollusca possessed by the British Museum. They were purchased from their original collector, Professor John Finch, in the year 1834. In those days, as Mr. Newton points out, type-specimens were not valued as they are now, and it is perhaps not surprising that they were accompanied by no particular indication of their historical importance. We gather from Mr. Newton's introductory remarks that he has been engaged on an "examination of certain documentary evidence connected with the history of the fossil invertebrate collections" contained in the British Museum. We understand that this examination is continuing, and we trust that it will lead to further results of no less value.

ABROAD.

We regret to hear of the death of Dr. Johann Janko, director of the ethnographical division of the National Museum at Buda-Pesth.

Commander A. de Gerlache de Gomery, who was in command of S.Y. "Belgica" in the recent Belgian Antarctic expedition, has been appointed a curator in the Natural History Museum at Brussels.

An Anthropological Museum.—The paper by Dr. W. H. Holmes, of the United States National Museum, entitled, "The classification and arrangement of the exhibits of an Anthropological Museum," to which we alluded in our September number (pp. 88-89) has now been published in full in *Science* for 26 September (vol. xvi., pp. 487-504). We shall not attempt to analyse the paper here, since we consider that all curators interested in such subjects should read the paper themselves.

From the Rue Buffon.—Professor Albert Gaudry has retired from his chair in the Paris Museum of Natural

History, and has been made honorary professor. Professor Gaudry's successor has not yet been appointed, but we gather that the choice lies between Dr. Marcellin Boule, who is on the spot and familiar with the collections, and Professor Ch. Depéret, of Lyon, whose knowledge of vertebrate palæontology would render him a most fitting occupant of the post.

THE HISTORICAL MUSEUM, CHRISTIANIA.—The rich historical and archæological collections of the University of Christiania, to the charge of which Professor Gustafson, has recently succeeded, are shortly to be removed to a fine new museum, now rapidly approaching completion, in the neighbourhood of the University. The building has been designed by the eminent architect, Henrik Bull, and from what we have seen of it, it appears as though it were another instance of the aggrandisement of architecture at the expense of a curator's needs. To take one small point that will at once impress the practical museum curator, the inner walls of the rooms are divided into shallow bays by a series of arches, but the supports of the arches, instead of being straight and so lending themselves to the application of cases, are designed in striking curves, which may be beautiful, but will certainly prove an endless source of annoyance to the curator. The museum is massively built and properly isolated, but since wood is introduced it seems rather a pity that the floors to the galleries should be of stone, which is both noisy and tiring to walk on. The building consists of three storeys stretching into long wings on each side of the elaborate central stair-case. In these circumstances, it is surprising and regrettable that no provision has been made for a lift, although one of the end towers contains space which might easily have been used for the purpose but is now wasted. The rooms are well lit by side windows, and this would not be particularly open to criticism if it were going to be possible to place table-cases containing the smaller and more richly ornamented objects in front of the windows. Unfortunately, just this space will be occupied by steam radiators. Possibly some explanation of these defects may be found in the fact that when the building committee was constituted the professorship of archæology happened to be vacant, so that Professor Gustafson, who was subsequently appointed, had no opportunity of expressing his views until it was too late. But if so, surely the building committee and the architect could have found some practical museum man to give them wholesome advice, without going many miles from Christiania.

BERGEN MUSEUM.—For the convenience of the numerous tourists who pass through Bergen, Dr. J. A. Brunchorst, the director of the Bergen Museum, has produced a short guide to

it, printed on a single folded card of eight pages. There is an edition in Norwegian costing 10 öre (little more than a penny), and one in English costing 20 öre. The guide is illustrated by (1) a plan of Bergen, shewing the way to the museum, and the tramline to the aquarium, in connection with the museum; (2) by exterior views of the museum and of the aquarium; (3) by plans of the ground- and first floors of the museum. The guide directs the visitor to pass through the museum in a definite order, beginning with the archæological collections, which have recently been arranged by Professor Gustafson, of Christiana, and are of considerable interest and value. It is more particularly the Viking Age or Later Iron Age, from 800 to 1050 A.D., that is richly represented in the museum. Following this are rooms containing remains of the Christian Middle Age, chiefly objects from the churches of the Roman Catholic time, and these are succeeded by church objects from the Reformation onwards. Two rooms are devoted to illustrating the development of art and architecture in Bergen. Connected with this section is a model of the well-known Hanseatic quarter, which, we regret to say, will shortly have to disappear before modern improvements. Several rooms on the ground-floor, as well as in the basement, contain furniture, household goods, costumes, and other objects illustrating the life of the people in the country districts of Norway from the beginning of the seventeenth century to the present day. The ground-floor also contains ethnographical and archæological collections from other countries and periods. The first floor contains the greater part of the zoological collection, in the arrangement of which good progress has recently been made by Drs. Brunchorst and Grieg. Nearly eight rooms on this floor are devoted to the exhibition of Norwegian vertebrates, conspicuous among them being the skeleton of the great basking shark, of which a plaster cast has recently been sent to the British Museum (Natural History), where it is now exhibited. The thirteen remaining rooms of the first floor are filled by the general collections, chiefly of vertebrates, but including a small synoptical collection introductory to the anatomy of invertebrates. The main collection of invertebrates, both Norwegian and the general systematic series, is contained in the galleries of the second floor. Time has not yet been found since the removal of the collections to their new quarters to arrange these properly. In the northern wing of the second floor are the collections of mineralogy and geology, as well as frames containing a collection of about a thousand species of Norwegian plants. It is proposed to place here a synoptical collection illustrating the structure and classification of plants, as well as plant diseases caused by fungi.

WESTERN AUSTRALIAN MUSEUM AND ART GALLERY.—Their Royal Highnesses the Prince and Princess of Wales have presented to this institution a volume of fac-similes of the original drawings of Hans Holbein, in the collection of His Majesty the King at Windsor Castle. They number fifty, and cover the whole period of Holbein's sojourn in England, from 1526 to 1543. The drawings were executed almost entirely in chalk of various colours, red chalk being used for the colour of the flesh and for the modelling of the features. The pictures are of the most notable personages of the period, commencing with the Queen, Jane Seymour, and her son Edward, Prince of Wales, afterwards Edward VI. One of the most characteristic drawings is that of John Fisher, Bishop of Rochester. These will be framed and placed on view as soon as space is available. His Excellency Sir Arthur Lawley, prior to leaving for South Africa, presented to the museum his valuable collection of heads and antlers, numbering in all thirty-one, as well as some weapons, which latter had been presented to him by the King of Barotsi. Lady Lawley presented a basket and some wooden boxes with curious carved lids from Barotsi. A set of specially selected coins of King Edward VII. has just been received from the Royal Mint, London. A series of enlarged photographs of extinct animals, received from Professor Henry F. Osborn, of the American Museum of Natural History, New York, has just been framed and hung in the mammalian gallery.

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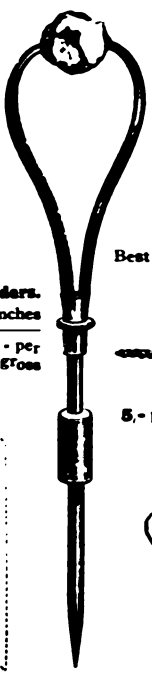

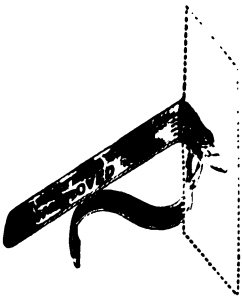

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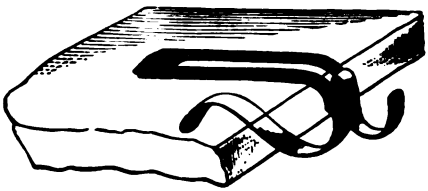

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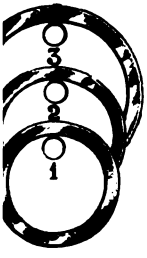

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That a General Meeting of the Association be held annually, for the transaction of business, the reading of papers, and the discussion of matters relating to Museums.

MUSEUMS ASSOCIATION.

Some of the earlier volumes of the Report are nearly out of print, and Museums requiring complete sets should order them at once. Particulars can be obtained from the Secretary, Museum, Sheffield.

THE MUSEUMS JOURNAL.

Vol. 2. *November, 1902.* *No. 5.*

The British Association, Belfast Meeting.

OF the various objects brought together for the inspection of members the most striking was certainly a series of actual specimens illustrating the different stages in the evolution of the Irish jaunting car exhibited by Messrs. Welch and Wise. Commencing with the old slide car, a basket resting on two shafts, the hinder ends of which trail on the ground; the next improvement is the clog-wheel car, in which the body is supported by two wheels made of solid wooden circles. The spoke-wheel was next introduced, and then the foot-rests were made by turning down the sides. Photographs of all these stages have been made by Mr. Welch from examples in actual use. Very few persons were previously aware that such primitive contrivances were still extant in the British Isles. Beside the cars were some wooden ploughs, shown by Mr. H. A. Matier, still in operation in the "old kingdom of Mourne."

The TEMPORARY MUSEUM was of more than usual interest, and was organised by Professor J. Symington, in his well-lighted dissecting-room, which was re-painted and fitted with table-cases for the purpose. These were well filled by exhibits illustrating papers read at various sections, mainly those at Section H (Anthropology), and, in addition, by various ethnographical and archæological exhibits connected with the north of Ireland, collected by Dr. Symington and Mr. R. Welch, who assisted him as museum steward for the meeting. The exhibits were accompanied by descriptive labels, each exhibitor being responsible for the accuracy of his own notes. The more striking of the specimens, with the names of the exhibitors were as follows:—

The Rev. J. Meehan—Straw mask and skirt from County Leitrim, regarding which he has given the following information:—The skirt is

never used now. They adopt the less troublesome means of wearing their Sunday shirt over their clothes, and, so apparelled, they are in "full dress." The skirt is always made with the corn hanging downwards, and does not look at all badly. These are the marks used to disguise the wearers when they go as uninvited guests to weddings or "dragging hours." The young fellows always act most honourably. It is a rule, never deviated from, that they shall accept neither drink nor any hospitality whatever. There is always a "captain," who is rigidly obeyed, and no captain would allow in his band any young man who was ever known to disgrace his party by breaking the rule first mentioned. They go for the dance. They arrive about midnight, or a little earlier, and their advent is welcomed as ensuring life and fun for the rest of the evening. When they arrive the bride and bridegroom have a dance, and then the "Captain" has the honour of a dance with the bride or bridesmaid.

R. Welch—Straw mask from Belmullet, model curach, Sheephaven type, cra-hooks, for spinning straw ropes and bog-fir rope, from west Donegal; shell necklaces from Bundoran, and framed sets of photographs connected with Ulster ethnography and archæology.

W. G. Knowles—Celts in various stages of manufacture, from the recently-discovered prehistoric "celt-factory" near Cushendall; typical Ulster flint arrow-heads, spear-heads, &c.: and some "plateau" implements from Antrim and Kent.

Rev. Dr. Buick—A large series of rude flint implements, cores, flakes, &c., from the raised beach at Larne.

W. H. Patterson—Rude pottery (fragmentary), bones, worked flints and flakes from prehistoric settlements on the coasts of Down, Antrim, and Donegal.

S. F. Milligan—Celts of stone and bronze, and worked flints.

W. A. Green and R. May - Old rushlight holders, crusies, and a "witches' stone," used quite recently over the door of an Antrim farm-house, to keep witches and evil spirits away. [This was placed over the door of Section H for the same purpose.]

R. Young—A local series of flint flakes and scrapers.

R. M. Young—Various finds from a kitchen midden, Co. Down.

Sir R. Ll. Patterson—Autographs of the Red Lion Club, at the Belfast meeting in 1852, given to the late Robert Patterson, F.R.S.

Dr. Symington—Human skull, with a fourth molar tooth, and a large series of human skulls cut and measured by the late John Grattan for his work on Craniology, with a copy of that work.

Dr. Scharff—Bones and teeth from the Kieshcorran caves, Co. Sligo.

Trinity College, Dublin—Skeleton of Magrath, the Irish giant.

Miss Andrews and Dr. Letts—Apparatus for the liquefaction of gases used by the late Professor Andrews.

R. Bell—Bricks made from diatomaceous earth (a small, peasant industry on the lower Bann); rush crosses, used by the Irish peasantry over their beds to keep evil spirits, &c., away.

F. J. Bigger—Straw cross.

Miss Davis and Rev. G. O'Laverty—Old Irish harps.

W. J. Fennell—Measured drawings of some Ulster souterrains, or places of concealment.

J. J. Phillips—Drawings of abbeys, diocese of Down.

J. Brown—Viagraph and patent wheel.

B. D Wise—Model of the Gobbins Cliffs lattice girder bridge.

E. Lovett—Tally sticks of various trades, British and foreign.

T. Steele—Marsupial embryos and *Peripatus* from Australia.

W. Hanna—The cobra and black viper of India, mounted to show the difference in their fangs.

F. T. Elworthy—Perforated stone amulets.

T. N. Annandall—Photographs of some natives of the Malay Peninsula.

Dr. Augustine Henry—Dress, household gods, &c., of the Lolos of Western Szechwan, China.

In Section G, Professor Fitzgerald had collected together a large number of framed photographs, &c, connected with some of the principal Belfast industries.

Messrs Wm. Ewart and Sons, Ltd., exhibited flax in various stages of manufacture.

In Section C, Geology, were fossils from local cretaceous sections, exhibited by R. Bell; local rocks, by J. St. J. Phillips; Irish rocks, by H. J. Seymour; and the 1902 additions to the National Collections of Geological Photographs, by Prof. W. W. Watts. Also framed sets of photographs illustrating the geology of the north of Ireland, in a form suitable for museum or educational purposes.

Of the papers read before the sections, two were of more than usual interest to the museum fraternity; one by Mr. W. H. Holmes, "On the Classification and Arrangement of the Exhibits in an Anthropological Museum," and by Mr. E. N. Fallaize, entitled "Suggestions for the Classification of the Subject-matter of Anthropology." Neither of these papers is capable of profitable summarising, and as the former is to be published in full in the *Journal of the Anthropological Institute* and the latter in *Man*, we can refer our readers to those periodicals for further details.

A Dust-Proof Air-Inlet for Museum Cases.

By A. Coombe, General Assistant, Bristol Museum.

DURING the course of building up four new floor-cases in the Bristol Museum, I was requested by the curator, Mr. Bolton, to attach to each a zinc trough ventilator packed with cotton wool, the cotton wool being used as a dust excluder. This device is one used, I believe, by Mr. W. E. Hoyle, at the Manchester Museum, Owens College.

It was found in practice, however, that the cases in the Bristol Museum would need to be lifted in order to attach the zinc air passage, and in order to obviate this proceeding, the following modification was tried and found to answer well in practice.

A circular hole of 1½in. diameter was bored from one side of the case floor to within a quarter-inch of the other or outer side. The brace-bit was then withdrawn and a 1in. brace-bit put on, the hole being then carried completely through.

This proceeding left a ¼in. ledge around the hole on the outer side of the case. Upon the ledge was placed a circular disc of perforated zinc, and the hole was then stopped up with cotton wool rammed down as hard as possible. A surface square plate of perforated zinc was nailed over the hole and the contained cotton wool, by which means a dust proof inlet and outlet to the case was formed.

This has been found quite as serviceable as the zinc trough formerly used, whilst it has the additional advantage of presenting no projection on either side, and of being possible to construct from the interior of the case.

The contrivance can of course be used in any part of a case, even on the front, if a neat grate or grill of woven brass wire be used instead of the perforated zinc.

Names on the Labels in Public Galleries.

By F. A. Bather, M.A., D.Sc.

[Read at the Bradford Conference, 1902.]

IN the discussion on the Civil Service Estimates, a member of the House of Commons drew attention to the fact that, in museums paid for by public money, and presumably intended in large part for the edification of the general public, little or no attempt was made to give the ordinary English names of the objects of natural history there exhibited, but that in their place were long Latin names, unintelligible, and indeed deterrent, to the majority of visitors. I do not think that I shall be betraying an official secret if I tell you that the director of the Natural History Departments of the British Museum, ever alive as he is to everything that can increase the popularity of his museum and its value to the public at large, has requested the members of his staff to pay more attention to this matter. It is not his intention that Anglicised names should be invented by translation of the Latin systematic names, but in every case where an English or local name exists for a specimen submitted, that name should be prominently shown, and where more than one English name exists, they are so far as possible to be all given. Local sportsmen's and commercial names of extra-British animals or plants should also be carefully ascertained and shown on the labels.

There is little doubt that those of you who have to deal with the exhibition of natural history specimens will sympathise with this intended action. Difficulties, however, arise when one attempts to carry it into effect, and it is with the view of discussing the necessary limits of the practice, and of obtaining such advice as may be useful, that I venture to bring this matter before you.

With regard to the translation of the Latin systematic names, it certainly leads to much absurdity. For example, a former officer of the British Museum labelled the well known Old Red Sandstone fish, *Holoptychius nobilissimus* as "The

most noble Allwrinkle."* But it will doubtless be the experience of all of you that the first question the ordinary person asks when brought to a stand by one of those long Graeco-Latin names is: "But why do you call it that? What does it mean?" To meet this enquiry, it has long been my custom to follow each generic name with a short statement of its derivation. In most cases this, combined with a short description of the main features of the genus, is enough to explain the name; but sometimes it may be advisable to supplement it with fuller information. It would not, for instance, be entirely illuminating to state that the trivial name of the Silurian brittle-star, *Protaster leptosoma*, is derived from *leptos*—light or delicate, and *soma*—body, when the fact is, that the animal was not called this on account of any peculiar meagreness of frame, but to do honour to Mr. Lightbody of Ludlow. Similarly, it is supposed, even by those palaeontologists who affect a knowledge of the dead languages, that the name of the little two-valved ostracod, *Leperditia*, means "double scale," while as a matter of fact, the author called it, for reasons best known to himself, after his tailor, a Monsieur Leperdit. Others might suppose that the name *Pleuronectes theophilus*, applied to a certain flat-fish, was intended as a translation of a bad pun—"a God-loving sole." Since, however, the author was a Frenchman, some other explanation must be found. Incidentally, an extension of the

* A few additional examples of these labels, copied from the originals still in the possession of the Geological Department, may afford amusement, if not instruction, to the reader:—"The bean-like Cutridge: *Acrotemnus Faba*, Ag. The broad Bluntwing: *Amblypterus latus*, Ag. The ample-finned Bluntwing: *Amblypterus macropterus*, Ag. The Glarisian Mockeel: *Anenchelys Glarisiana*, Ag. The uneven-sided Mockeel; *Anenchelys heteropleura*, Ag. The border-toothed Needlenib: *Belonostomus cinctus*, Ag. The rhombic Gasteroneme: *Gasteronemus rhombeus*, Ag. The sightly Hybodus: *Hybodus speciosus*, Ag. The adorned Lepidote: *Lepidotus ornatus*, Ag. The showy Lepidote: *Lepidotus speciosus*, Münst. The dubious Leptolepis: *Leptolepis dubius*, Ag. The papyraceous Leucisk: *Leuciscus papyraceus*, Ag. The Mantellian Macropome: *Macropoma Mantellii*, Ag. Hibbert's Micklefish: *Megalichthys Hibberti*, Ag. The strange Myriacanth: *Myriacanthus paradoxus*, Ag. The dorsal Eftling: *Ophiopsis dorsalis*. Ag. Humboldt's Hindwing: *Pygopterus Humboldtii*, Ag. The fork-tailed Nosey: *Rhinellus furcatus*, Ag.

practice of explaining the meanings of names might deter zoologists from perpetrating the barbarisms and absurdities by which they profess to confer honour upon those of their colleagues whom they presumably consider unable to achieve it by better means. Of course, when a learned naturalist names a flea or a coprolite after his most familiar friend, the humour, if not the honour, is obvious; but it might prove disconcerting to have to explain that *Etheridgaster* does not mean "airy stomach," but Mr. Etheridge's star-fish, or to set down in black and white that *Lapworthura*, if literally taken, means the "tail" of the highly respected professor of geology at Birmingham University.

But we are forgetting the vernacular names. As to these, as already stated, there are difficulties. One difficulty is the existence of a large number of local names for the same species. To give all of these would, in some cases, be confusing rather than enlightening. The difficulty is increased when a vernacular name as commonly used in one part of the country means one species, whereas in another part of the country it means another species. This leads one to suggest that, in such cases, it would be advisable to state precisely the district in which each vernacular name is current.* The difficulty presents itself under another aspect when we are dealing with a widely distributed species, such a one as may have a name in every European language. I would suggest that foreign vernacular names be reserved for specimens coming from the respective countries; otherwise one's labels would be turned into a polyglot dictionary.

It is assumed that the names here in question have the sanction of immemorial usage within their districts, and that it is not permissible to stigmatise any of them as incorrect. There are, however, names which the purist considers to be incorrectly applied in many cases. To take a notorious example—how will you prevail on any European naturalist to apply to the American bison the name "buffalo" by which it is known, not merely to all Americans, but to all admirers of

* When this paper was read, a member suggested that curators might get much help from the lists of local names of animals and plants published by the English Dialect Society.

Fenimore Cooper and of Mr. Cody? In like manner, a botanist who swears by Linnaeus might object to apply the name "syringa," by which he understands the lilac, to that species of *Philadelphus* otherwise known as the mock-orange, although such application of the name is almost universal, and is, as a matter of fact, warranted by the usage of the older botanists. In such instances as these, and in similar cases, where, for instance, an animal that is not an ox is called a musk-ox, or a creature not a crab is called a king-crab, it might be as well to add an explanatory warning. To instance a group in which I am personally interested, it has always seemed to me a mistake to speak of the crinoids as sea-lilies. People are quite ready enough to refer these stalked and branched animals to the vegetable kingdom, without being led to do so by the prominent exhibition of an erroneous name. After all, since the names sea-lily and stone-lily are little more than adaptations from the language of the learned, and not truly vernacular, one may, perhaps, be excused for reducing them to a position of quite third-rate importance. Names such as these may be classed as literary names invented by writers, not merely poets, to shun the introduction of a Latin nomenclature into their exceedingly pure English style. Literary names may have, of course, an interest of their own, but, if introduced on labels, it would be as well to point out that they are often very different from the true local names.

On the general principle governing the introduction of vernacular names into museum labels, the invention of English equivalents by which I do not necessarily mean translations from the systematic names—is both unnecessary and a mistake. There are then two sets of names to be learned instead of one. It is more to the point to familiarise people from the beginning with the scientific names alone. In this there is really no difficulty. Many of our garden plants are familiarly spoken of under such long Latin and Greek names as *Calceolaria*, *Rhododendron*, *Convolvulus*, and *Chrysanthemum*, by lips totally unfamiliar with any language except their own. That the spread of scientific nomenclature is perhaps taking place more rapidly than we think, is exemplified by the following observation. A father and his

little son were reading one of the labels in a public museum. "Sloth!" said the father, "Giant sloth! I wonder what on earth they mean by that." "Oh!" replied the boy, "I expect it's the *Megatherium*." "Ah," rejoined the father, greatly relieved, "*Megatherium!* Of course it is. Come along!"

It is the sportsmen's and commercial names that are the greatest offenders in the manner just alluded to. There seems to be something in commerce that compels an erroneous nomenclature. Thus, soda-water is innocent of soda; effervescing citrate of magnesia has, I believe, neither magnesia nor citric acid in its composition; and the briar pipe, as every smoker knows, is made, not of anything that we call briar, but of the roots of the French "bruyère," *Erica arborea*.

With regard to sportsmen's names, and especially those given by local sportsmen, the difficulty here is to find out what they are. Is it not equally important to give the native names? These are often of considerable interest, being descriptive of the form or habits of the animals; but, to make this clear, the names should, of course, be translated.

There is another matter in connection with names on labels to which I would take this opportunity of alluding, and that is the addition of the name of the author of the genus or species to the systematic name itself. If the addition of the author's name be necessary in the case of labels intended for a public gallery, then I would ask if it might not be better, as it certainly is, as a rule, possible, to write that author's name at full length. What, I would enquire, is the advantage to the public of writing *Apterornis coerulescens* Schl., *Porphyrio veterum* Gm., *Ocydromus* Wagl., *Moschus* L., or *Ophiomyxa* M. and T.? If the casual visitor notices such things at all, he certainly cannot understand them, and, as likely as not, they appear to him merely a fresh piece of unnecessary mystification on the part of the pedant. If he has an inkling that they are intended for the names of people in some way or other connected with the specimen or species, he certainly will, in many cases, have a hard job to find out what the names are that these contractions signify. How many of you—or, indeed, how many

professional zoologists—can say, off-hand, who are meant by Schl., Wagl., M. and T., Per., Carp., Mas. and Alc., M.V.K., and the like?

I am not objecting to the use of such contractions altogether. If it be necessary or advisable, as it certainly is in many cases, to follow the specific name with the name of the author, whether for the sake of distinguishing it from a synonym or as an indication of the literature, then it might become tedious to repeat the name of that author in full many times on a single page. A desire to avoid a wasteful repetition was the origin of, and remains the excuse for, a system of contraction which the Germans have brought almost to the level of a branch of science; but contractions which may be (although they by no means always are) perfectly intelligible to the specialist, are a stumbling-block to the student, and still more to the reader who might become a student, if a hand were held out to welcome him. I consider, therefore, that such contractions are out of place both in popular works on natural history and in the public galleries of our museums. In the latter case, one reason for the use of contractions, namely, the saving of space, scarcely applies, since there is, as a rule, plenty of room on a large museum label for the spelling out of the author's name, especially as it should always be printed in smaller type. If the addition of the author's name be necessary—if it be of any value to the frequenters of the museum, surely it will be of more value if it is not turned into an unnecessary enigma.

I think, myself, that the author's name has become somewhat of a fetish to many of our writers on systematic zoology. The name of an animal should be sufficient in itself, and one must assume that, in a museum, the rules of nomenclature are adhered to, and that the name given to a particular specimen is that which every expert would recognise as correct. Only in cases where experts might differ, need the author's name be added. But, setting this objection aside, the giving the author's name in full might really prove an additional source of interest to the casual visitor. Most people have heard of Linnaeus, or Richard Owen, or Agassiz, and might be

interested to see that a particular species was due to one or other of these great naturalists; but they would certainly not gather this from the letters Ag., Ow., L.

The affixing of authors' names is thought by some to be of use as directing the student to the literature of the subject. Accepting this view, I would make my sign-post as clear as possible, not merely by spelling out the name, but by giving along with the main label of each genus, a reference to the original description and to the latest paper on the subject.

I am aware that many of the opinions to which I have here given expression are not shared by all my colleagues, and I beg that you will not attach any official character to these incomplete suggestions. My object in putting them before you is merely to provoke a discussion and to carry away from it something that may be of use to me in my own work.

The Carnegie Institution of Washington, D.C.

THE following letter from Mr. Daniel C. Gilman, President of the Carnegie Institution, appeared in *Nature* last month:—

It gives me great pleasure to answer in writing some of the questions which you, and others who are interested in scientific research, have asked in respect to the scope of the institution lately founded in Washington by Mr. Andrew Carnegie. To begin with, it may be well to recapitulate the facts already made known. The amount of his gift is ten million dollars (£2,000,000), so invested that the annual income is five hundred thousand dollars (£100,000). The control of this fund is invested in a board of twenty seven trustees, selected from widely separated parts of the United States, and including many men who have won distinction and confidence by the service they have rendered in public life. It is not a board made up of specialists, but rather (if I may be allowed the expression) of generals, that is to say, of men accustomed to the administration of large affairs, political, financial, philanthropic, and educational. Absolute power is given to this board to devise such methods and form such plans as

may seem to them wise in order to carry out the purposes of Mr. Carnegie. These purposes he has clearly defined in the deed of trust and, with less formality, in the remarks which he addressed to the trustees when they first came together on January 29th, 1902, under the chairmanship of the Hon. John Hay, Secretary of State, and recently the Ambassador of the United States in London.

In one general phrase, which reads as follows, Mr. Carnegie thus lays down the principle which has guided him:—"It is proposed to found in the city of Washington an institution which, with the co-operation of institutions now or hereafter established there or elsewhere, shall in the broadest and most liberal manner encourage investigation, research and discovery, show the application of knowledge to the improvement of mankind, provide such buildings, laboratories, books and apparatus as may be needed, and afford instruction of an advanced character to students properly qualified to profit thereby."

There are six points upon which the munificent donor then proceeds to lay emphasis, and these are namely, the promotion of original research: the discovery and encouragement of exceptional men; the increase of facilities for higher education; the assistance of those now engaged in research; the bringing to Washington of students qualified to profit by the work carried on in the several departments of the Government; and finally, the publication of scientific memoirs.

So far all was clear. Mr. Carnegie's part was performed. Now began the perplexities and responsibilities. The trustees, many men of many kinds, must take the subsequent steps. Fortunately there was no occasion for hasty action; at the outset no buildings were to be constructed, no faculty was to be brought together. Such considerations could be postponed indefinitely. The trustees decided to take time for reflection and for conference with the leaders of science at home and abroad, before the adoption of a programme. Letters were addressed to many persons who could not be reached in person. Confidential interviews were secured with those who could be seen in Europe and the United States. The experience of existing institutions was studied, such as the Royal Society,

the Royal Institution, the Academies of Science in Berlin, Munich, Vienna, Paris and other cities. Attention was given to the conditions which have helped or retarded the progress of eminent men during the last generation—Darwin, Pasteur, Helmholtz, Abel and Virchow for example in Europe—Henry, Agassiz, Dana and Rowland in America—and also the encouragements and discouragements which are encountered by the men of to-day. Time will be required for the digestion of this material in order to discover the methods which are most efficacious in the advancement of knowledge.

Meanwhile, much co-operative council will be given by experts in various branches of learning. As soon as the general purposes of Mr. Carnegie's foundation were made known, hundreds of applications for assistance were received—the number of self-discovered "exceptional men" was large. The number of trivial applications for help in the prosecution of researches was surprising but, on the other hand, the number of well-considered, important, fundamental inquiries suggested by men of the highest rank among the promoters of knowledge indicated that the entire income would all be absorbed at no distant day. Discrimination, therefore, became the paramount virtue—discrimination which should meet the approval, and, if possible, the concurrence of the world's wisest men.

For this discrimination the aid of specialists was indispensable. The astronomer was not the man to judge of biological claims, nor the chemist of economic problems. No board of "generals" could wisely act without the aid of a strong advisory staff of "adjutants." Accordingly, the authorities of the Carnegie Institution proceeded to select and enlist a number of advisory committees. Three, four, or five well-known authorities were chosen in each of the principal branches of science. All their expenses for travel and for clerical assistance were generously paid by the fund, but their services, like those of the trustees, were cheerfully given to the public without remuneration, and often at the sacrifice of time and convenience. Their hearty co-operation is a fresh illustration of the public spirit of men of science in our day, and their readiness to appreciate and help on the most deserving

claims, irrespective of local or personal preference, augurs well for the efficiency of the Carnegie Fund and for the wisdom of the plans that will presently be adopted.

More specific announcements cannot be made until the trustees come together for their second meeting at the close of November.

A careful perusal of Mr. Carnegie's language will bring out several points, to some of which I will venture to call attention. Here we have that special "endowment for research," which has been during the last thirty years and more the desire of so many men in England and America. This endowment is independent of any existing academy, university, or school of technology; but it may co-operate with any that now exist or that may be established. It does not establish a university in Washington, which so many have advocated and so many disapproved. Mr. Carnegie on this point is explicit and decided. The efficiency of the new institution is not restricted by any local, political or ecclesiastical fetters. Nor is there any attempt to decide what science includes. None of the progressive organised and systematic branches of knowledge are excluded. Economic, historical and archæological inquiries may be aided as well as those which are more obvious to the public—physical, chemical, biological, geological and astronomical researches. Education may be encouraged, but it must be by the personal development of uncommon talents, the advanced student, the young professor, "the exceptional man." To the last clause of his deed of trust, Mr. Carnegie attaches the highest importance. It corresponds with a clause in his gift to the Scotch universities. The trustees by a majority of two-thirds "may modify the conditions and regulations under which the funds may be dispensed"—if time, experience, and changed conditions call for new arrangements.

Sunderland Pottery.

MR. J. M. E. Bowley, curator of the Sunderland Museum, furnishes the following notes, which may be useful for labelling purposes in other museums containing examples of Sunderland ware:—

NORTH HYLTON.—This pottery was established in 1762 by Christopher Thompson and John Maling. The first printed ware made in the North of England was manufactured here. The works were also celebrated for lustre and enamel-ware. Mr. R. Maling went to the Tyne in 1817. These works were afterwards carried on by Dixon and Austin, and, subsequently, by Dixon, Philips, and Co., who, at the same time, owned the Sunderland or Garrison Pottery. These works are now closed.

SOUTH HYLTON OR FORD POTTERY.—The works of Messrs. John Dawson and Co. were erected in 1800, and carried on by the firm until 1864. Part of the premises were, for several years afterwards, used as a brown ware manufactory. They are now closed.

SOUTHWICK POTTERY.—This pottery was built in 1788 by Mr. Anthony Scott, who had, previously, carried on a small potwork at Newbottle. Messrs. Scott Brothers stood high in the scale of manufacturers. The works were closed in 1897.

WEAR POTTERY.—This pottery was founded by Messrs. Brunton and Co. in 1803, and was acquired by Messrs. Samuel Moore and Co. About 1864 it passed into the hands of Mr. Robert T. Wilkinson, who, however, retained the old name of Moore and Co. These works are now closed.

DEPTFORD POTTERY.—These works were established at Diamond Hall in 1857 by Mr. W. Ball for the manufacture of flower pots. In 1863 the manufacture of Sunderland ware was carried on by Ball Brothers. Suspenders, highly decorated and other flower vases, seed boxes, cane, lustre ware, &c., are extensively made.

HIGH SOUTHWICK AND ST. BEDE'S POTTERY, MONKWEARMOUTH.—These potteries were established and carried on by Mr. T. Snowball for 37 years, for the manufacture of Sunderland ware, &c. They ceased to be worked in 1885.

SHEEPFOLDS POTTERY.—These works were established about the year 1845 or 1846, by Messrs. T. J. Rickaby and Co., for the production of Sunderland ware.

SUNDERLAND OR GARRISON POTTERY.—This pottery, which was established by Mr. Philips, and afterwards carried on by Messrs. Dixon, Philips, and Co., produced white and Queen's ware in all the usual variety of articles Sponged, printed, painted, and lustre earthenware were also produced The works have been discontinued for many years, the site being now occupied by the Friends' Meeting House, North Moor Street.

Museum Publications.

THE MANCHESTER MUSEUM, OWENS COLLEGE. Museum Handbooks: Correlation Tables of British Strata, by Bernard Hobson, M.Sc., F.G.S. Fol., 5/-. Dulau and Co. 1901.

In a series of nineteen double sheets, which are so folded that each one could be taken out and used as a descriptive label for museum cases, are set forth the principal geological formations, beginning with the pre-Cambrian and ending with the Pleistocene. Each sheet is ruled in columns, these being headed with the different localities where the various series forming the larger formations occur, and the names of these local beds, together with their thicknesses, are given in the columns, the different zones being printed in the first column. At the bottom of the columns are printed the references to the original publications referring to the local series of beds enumerated. As a tabular epitome of geological formations, this work is decidedly useful, though, in giving one sheet to each principal formation, it is, of course, quite impossible to show the more detailed sub-divisions of it, such as a practical, working geologist might desire. At the same time, the ordinary museum visitor or elementary student has ample information for his purpose, and his intelligence is exercised in discerning the relative position of the various beds thus arranged in vertical columns, and shown in type. Geological nomenclature is so mixed that it is not easy to correlate accurately the many divisions, which may be spoken of as beds, series,

shales, slates, or almost anything else. This, of course, is not peculiar to this particular work, but meets the student everywhere, and he may sometimes ask himself why, if zoologists can use interchangeable and fixed terms, such as phylum, class, order, family, genus, and species, with a "sub" to each of them where necessary, is it beyond the genius of geology to fix on somewhat similar relative terms, such as formation, system, series, stage, group, &c., and let each of these have, as near as possible, a recognisable relation to each other. The different types used in these tables, the clearness with which they are printed, and the orderly arrangement, bring them as near to workable perfection as can be expected, especially viewing them with regard to museum illustration.

HANDBOOK TO THE MINING AND GEOLOGICAL MUSEUM, SYDNEY. By G. W. Card, Curator and Mineralogist. 8vo., 202 pp., x. pls. Sydney: Geological Survey of New South Wales. Price 6d. 1902.

This museum, so far as the specimens in it are concerned, is only some ten years old, having been begun afresh by the late Mr. C. S. Wilkinson, after the former valuable collections of the Geological Survey of New South Wales were destroyed in the fire at the Garden Palace. Since it was described in a paper on Colonial Museums published in the Report of the Museums Association for 1894 (see pp. 216-217), it has been transferred to more commodious premises in a building of galvanised iron, formerly occupied by the collections of the Technological Museum. This building is situated in the Inner Domain at the back of the Sydney Hospital, and a portion of it, comprising an area of 5750 square feet, has been allotted to the museum, while the rest is used for work-rooms. The main object of the museum is to illustrate the geology and mineralogy of the deposits of New South Wales, but specimens bearing upon special modes of the occurrence of ore in other parts of the world are also exhibited for comparison. The greater part of the space is occupied by the collection of metallic ores, those of each metal being arranged geographically. There is also a collection of rock-forming minerals and a fine collection of fossils, which is arranged in stratigraphical order around the building. There are two introductory cases for the instruction of students, containing among

other things, a series of fossils characteristic of the sedimentary formations of New South Wales, so that mine-managers may readily identify the fossiliferous formation they are working in. There is also a series of typical minerals, rocks, and fossils, which can be handled by students. Photographs illustrating the geology and mineralogy of the state are mounted in an album or framed and hung on the walls.

The present guide is chiefly devoted to an account of the minerals of economic value that are found in New South Wales, and while strictly a guide to the objects exhibited in the museum, is made interesting to the reader by the introduction of many remarks of a more general character, while no effort is spared to render the whole intelligible to those with but the most elementary geological and mineralogical knowledge. There are also short chapters devoted to the following series of exhibits:—Minerals of economic value, other localities; Rock-forming Minerals; Meteorites; Lode and Block specimens; Glacial Geology; Structural Geology; Rocks; Stratigraphical series; Geology of Sydney. The classification of the sedimentary rocks of New South Wales given on p. 178 may be useful to geologists in this country. The work closes with some elementary notions in illustration of the students' cases, a glossary of technical terms, and an index to all rocks and minerals mentioned.

The price at which the volume is issued is of course only explicable on the assumption that the Government of New South Wales is doing its best to encourage the practical miner to take a more scientific interest in his work. In this task it could have no better helper than Mr. Card.

MEMOIRS OF THE CARNEGIE MUSEUM. Vol. I., No. 1. *Diplodocus* (Marsh), its Osteology, Taxonomy, and probable Habits, with a Restoration of the Skeleton. By J. B. Hatcher. 4to. Pittsburgh, July, 1901.

This new publication of the Carnegie Museum is in every respect admirable, and gives promise of leading to most valuable results in disseminating not only a knowledge of the contents of the museum, but adding greatly to the scientific information of the various groups represented in it. The paper, printing, and general "get-up" of the work are all that could be desired, while the clearness of the illustrations leaves no

doubt as to the identity of the specimens dealt with. In an announcement on the cover it is stated that "The Memoirs will appear occasionally, and when enough to form a volume has been printed, a permanent title-page, a table of contents, and an index will be supplied." The subscription price of the Memoirs is ten dollars per volume, in parts as issued.

In the number of the Memoirs now under notice, general reference is made to the great additions to the number of specimens of the extinct vertebrate life of America in recent years, special credit being given to Professor Marsh for the vast collections he acquired. The material upon which the present paper is based belongs for the most part to one of two skeletons, one of which was collected by Dr. J. L. Wortman and party in 1899, while the other was secured by Mr. O. A. Peterson, during the expedition of 1900, while engaged in making further excavations in the same quarry on Sheep Creek, in Albany County, Wyoming, which had yielded Dr. Wortman such excellent material during the previous season. The museum is indebted to the well-known generosity of Mr. Andrew Carnegie for the acquisition of all this and much other valuable material. Commencing with a full description of the skull of *Diplodocus*, of which there is no specimen in the museum, the paper goes on to deal in full detail with the vertebræ, clavicles, ribs, scapula, pelvis, limbs, and feet, giving numerous figures in the text to elucidate the descriptions. There is then a brief reference to the classification of the *Dinosauria*, and the differentiation of the species of *Diplodocus*, followed by a description of the restoration of the creature. The probable habits of the genus are referred to, and a bibliography is given at the end of the text. There is a very commendable clearness and direct descriptive force in the literary style of the work which makes it easy and comfortable to read, even when dealing with the more abstruse problems of fossil reptilian anatomy, while the careful attention to details, and the comprehensive knowledge of the subject shown by the author, places the work in the first rank of the treatises on American Dinosaurs. There are thirteen plates at the end of the work, the first showing the positions of the two skeletons in the quarry where they were found, the following eight show-

ing the vertebræ, the next illustrating the hind limb and foot; plate 12 shows the pelvis and caudal vertebræ, while the last one gives a restoration of *Diplodocus Carnegii*, the species taking its name from the honoured donor and liberal supporter of the institution issuing the Memoirs.

General Notes.

A TUBERCULOSIS EXHIBITION.—During the meeting of the International Tuberculosis Congress at Berlin, beginning on October 22nd, a temporary museum, illustrative of tuberculosis, was arranged in the upper rooms of the palace of the Prussian Diet. Among the exhibits were the materials used in Koch's first series of experiments for discovering the tuberculosis bacillus, models of consumption wards, and various objects connected with the treatment of the disease. There was also a series of models of the human form, illustrating the extent to which consumptive traits have been rendered by artists, the best known being perhaps the figure of Simonetta Catania, who was Botticelli's model for his Venus. Surely the connection of science and art in the museum has rarely been so intimate—or so gruesome!

AT HOME.

MUSEUMS ASSOCIATION.—It has been suggested that the Association should hold its annual conference in Norway, at as early a date as can be arranged, and the authorities of the Bergen Museum are prepared to invite the Association to meet there. Trondhjem and other parts of Norway could probably be visited, as well as Bergen, during the course of the meeting, and there is no doubt that British curators would gain valuable information from an inspection of some of the chief museums of Norway. The cost of the journey, to and from Bergen, including meals on the steamer, would probably be about five pounds. The Council would be glad to learn the views of members and associates as to the feasibility of attending a conference at Bergen, so as to arrive at some approximate idea of the number who would be likely to attend; and they would also like to know whether the year 1904, or 1905, or 1906 would be preferred. It should be mentioned that some influential Norwich people are anxious that the Conference in 1904 should be held in their city. Will members kindly communicate their views on these points to the Secretary of the Association as soon as possible?

BRITISH MUSEUM (NATURAL HISTORY).—Mr. W. D. Lang, of Cambridge, has been appointed to the assistantship in the department of geology rendered vacant by the promotion of Dr. Bather early in the year. Mr. G. C. Crick, of the same department, who has for many months been absent through illness, has, we are glad to learn, recently resumed his duties.

HORNIMAN'S MUSEUM, LONDON.—A series of lectures on scientific subjects has been organised at this museum, in pursuance of an arrangement made by the Technical Education Board and the London County Counci . The first course of ten lectures, beginning on October 18, is to be on the natural history of animals, and the lecturer is Mr. Alfred C. Haddon, University lecturer in Ethnology, Cambridge. Other lectures will deal with the natural history of man, and they will be followed by a course of five lectures on the evolution of art. In an address given at the inauguration of the lecture scheme, Mr. Haddon insisted on the unity which characterised nature, and made some pointed remarks as to the effect of fashion and commerce on the balance of nature. The feather which a lady wore on her hat involved the killing of a bird. The death of the birds gave a better chance of life to the insects on which they fed, and the insects sometimes did such harm to agriculture as might lead to the ruin of a farmer in some part of the world. Again, to get the ivory which they had on the handles of hair-brushes and other things of personal or domestic use, they had to kill elephants, which were extremely useful beasts of burden. The ivory had to be conveyed to the coast by slaves, and no doubt the greater part of slavery in Africa was due to the fact that people would have ivory.

MAPPIN ART GALLERY, SHEFFIELD.—Last winter the committee of this gallery arranged for a couple of lectures on the pictures in the permanent collection. These were so popular that more than 2,000 people attended them, and it has therefore been decided to continue them this season, extending the subjects so as to embrace British art generally.

SOUTH SHIELDS MUSEUM ROBBERY.—At the last meeting of the Association reference was made to the danger of exposing tempting and valuable coins in museum cases, and the warnings then given received justification at South Shields in October. Between the 23rd and 27th of that month a quantity of gold, silver, and bronze coins and medals were stolen from the South Shields Museum. Five of these coins were sold to different tradespeople in the town, the sum of £2 10s. being given for one of them, a Queen Victoria Coronation medal. A labourer, who was apprehended,

admitted the theft, and one of the missing medals was found in his possession. All the coins were recovered except a Roman coin.

NEWBURY MUSEUM.—On Friday, November 7th, Mr. J. E. Horne, Master of the Clothworkers' Company of London, reopened the ancient Cloth-hall at Newbury, Berkshire, which has been restored as a memorial to Queen Victoria, and will in future be utilised as a local museum and art gallery.

TYPES AT JERMYN STREET.—In the "Summary of Progress of the Geological Survey for 1901," published October, 1902, Mr. H. A. Allen continues his useful "Catalogues of Types and Figured Specimens preserved in the Museum of Practical Geology, London." The groups dealt with this year are the British fossil Phyllocarida, 36 specimens, and the British Palæozoic Echinodermata, 99 specimens. The references to literature appear particularly exact and complete.

A GRUESOME MUSEUM.—Newgate is parting with its treasures and relics prior to its demolition. The authorities of that gloomy prison-house have just handed over to the Guildhall Museum a large number of objects connected with the criminals who from time to time have found temporary but enforced lodgment within its walls. These embrace straps, manacles, and foot-blocks, used in restraint of refractory prisoners; a huge number of records, volumes of the *Police Gazette*, a whipping-block, a set of leg-irons, four waist-belts, and some old chains from the chapel. All have been moved to the Guildhall, where they will be placed on view among other objects of interest in the crypt of that building. While some will find the various instruments of torture or restraint attractive, students will turn with most interest to the documents and records, which contain some really valuable information relating to the city; not all, or indeed much of it associated with the crimes which, through many generations, have been expiated in the cells or on the gallows of Newgate.

SUNDERLAND MUSEUM AND CLARKSON STANFIELD, R.A.—Mr. Field Stanfield has presented to the Sunderland Library one of the original sketch books of his father, Clarkson Stanfield, R.A. It is of special interest, containing, as it does, a drawing of a house in High Street, and underneath is written: "Sunderland, August 13th, 1841." In another part of the book there is a diary of his visit to the north, and under date, Thursday, August 12th, is chronicled: "In Sunderland for the first time since about the year 1812." It is easy to suppose that the sketch of the house is the one in which he was born. It also contains a diary of his visit to Italy in 1838-39; and of his visit to the North of England and

Scotland in 1841. Clarkson Stanfield was born in Sunderland High Street, December 3rd, 1793, and died on May 15th, 1867. His father, James Field Stanfield, founded the first Literary and Philosophical Society in Sunderland. He died May 15th, 1824.

NATIONAL GALLERY.—The late Sir James Morse Carmichael, Bart., has bequeathed seven cabinet pictures to the National Gallery, consisting of works by G. Dow, J. van der Heyden, Wouverman, Parmigiano, Van der Werff, and A. Berghem.

HULL MUSEUM LECTURES.—The visits of children from the elementary schools to museums, for the purpose of direct teaching, are now paid regularly in nearly all towns in England, and the officials of museums endeavour to meet the requirements of the children by arranging short lectures on specified and limited subjects. One of the most ambitious attempts in this direction is set forth in a circular issued by Mr. T. Sheppard, F.G.S., curator of the Hull Museum, in which it is stated that "Museum lectures to scholars will be delivered on Tuesday, Wednesday, and Thursday mornings, at 10.30, by arrangement with the curator. Each lecture lasts about half an hour, and is illustrated by objects from the cases, &c. Half an hour is also allowed for examining the specimens, taking notes, &c." Then follows a list of twenty lectures, which embraces almost every conceivable subject, though whether it would be possible to deal in any sense adequately with such subjects in half an hour is somewhat open to question. Nor do the lectures appear to be arranged with that discrimination suited to the simple requirements of children in elementary schools. For instance, to deal with "The Ice Age—Modern Glaciers—Moraines—Striated Surfaces—Erratics—Yorkshire Glacial Deposits—Boulder Clay—Fauna," all in the space of one half hour, in such a manner as will suit the understanding of a child, will be no easy task. "The Races of Mankind" is another comprehensive lecture, and "Birds, Reptiles, and Fishes" are all to be made familiar in thirty minutes, as well as the "History of Hull," both geological and human. It would probably be found more serviceable to limit the scheme, for the syllabus of the lectures given seems to be more suited to an extensive university course than to simple talks to children.

BRIGHTON MUSEUM.—The museum belonging to the Brighton Corporation has just been enriched by a munificent gift from Mr. Henry Willett, a local resident, who has given the whole of his collection of British pottery and porcelain to the institution.

MARINE LABORATORY AT LOWESTOFT.—At a recent meeting of Lowestoft town council a letter was read asking the council's support to the suggested establishment of a marine laboratory at Lowestoft. All interested in the fishing industry will be interested to hear that Lowestoft is to be made the headquarters for the investigations into certain North Sea fishery problems, which are to be carried out by the Marine Biological Association for the British Government, acting in co-operation with the international committee recently appointed by the Copenhagen conference. Mr. Walter Garstang, of the Marine Biological Association, naturalist in charge of the fisheries investigation, and convener of the trawling committee of the International Council, has come to reside in Lowestoft, accompanied by an able staff. A commodious laboratory is being fitted up in Waveney Road (overlooking the Trawl Market), and a steamer, by which dredging and trawling operations will be conducted, is expected shortly.

ANCIENT FLINT MINE.—An interesting discovery has been made in the neighbourhood of High Wycombe, in connection with the construction of the new main line of the Great Western and the Great Central railway companies. In the course of excavating a hill, an ancient flint mine has been unearthed, together with an interesting specimen of a pick made of the antler of a stag with its points worn smooth. Many of the disintegrated blocks bear the marks made by the picks used by prehistoric workmen. The hill bears traces of having been worked with great industry for a long period of years.

EAST YORKSHIRE IN ANCIENT BRITISH TIMES.—There are few parts of the British Islands that have yielded so many interesting relics of pre-historic times as has East Yorkshire, and few districts have been so thoroughly explored. For over forty years Mr. J. R. Mortimer, of Driffield, has been investigating the various barrows and other early monuments of the Riding. The results of his labours will shortly be given to the world by a local publisher, and, unquestionably, the work will be one of the most valuable contributions to archæology that has been issued for some time. Mr. Mortimer's museum at Driffield, in which his geological and archæological collections are arranged, has long been a place of reference alike to professors and students. Sir John Evans, Professor Boyd Dawkins, Canon Greenwell, and others have made use of the specimens in their studies. Only a few weeks ago Dr. Rowe, of Margate, visited the museum in connection with his researches on the chalk echinoderms, and at the present time Mr. W. Wright, of the Birmingham University, is making an

exhaustive examination of the pre-historic crania, an excellent series of which is fortunately preserved. Mr. Mortimer's collection is one of the very few which still exist in the district in which it has been got together.

RECENT IRISH METEORITE.—The meteoric stone which fell near Crumlin, county Antrim, on September 13, has now been verified by Mr. L. Fletcher, of the British Museum, who gives a description of it in *Nature* for October 9. It is rather singular that this meteorite should have fallen within twelve miles of Belfast, while the British Association was holding its meeting there, and, more singular still, that not one of the members should have thought it worth while to investigate the circumstances. The stone weighs 9lb. 5½oz.; is 7½ inches long, 6½ inches wide, and 3½ inches thick. It is the largest meteorite that has been seen to fall from the sky to the British Isles for 89 years, and is larger than any that has fallen in England itself since the year 1795 The stone is now on exhibition in the central hall of the Britlsh (Natural History) Museum.

GEOLOGICAL SURVEY.—A summary of the progress of the Geological Survey of the United Kingdom and Museum of Practical Geology for 1901 has been issued by the Board of Agriculture. It gives a full account of the field work of the Geological Survey throughout the year, and of the chemical, petrological, and palæontological work in connection therewith. In the West of England, the process of sub-dividing the great killas-formation of De la Beche has been continued; and a new division (the Hayle sandstone) has been recognised. A considerable mass of granite, later in date than the main mass, has been found in the Land's End district, thus proving that the granite area is not so simple in structure as represented in the earlier maps. Special attention has been paid to the metamorphism produced by the granite, not only on account of its scientific interest, but also because the more important mineral veins occur in the metamorphic zone. In the Devonian and carboniferous areas of the West of England, additional evidence has been obtained of an important unconformity between the middle culm beds and the Devonian. In the South Wales area, the detailed examination of the coalfield has proceeded as far west as Swansea, and some new inliers of silurian rocks have been detected in Gower. The re-survey of the Midland coalfields has been continued. In the northern district of Scotland work has been carried on in Ross-shire and Inverness-shire, extending eastwards from Loch Hourn to Loch Ailsh. Much additional information has been obtained as to the crystalline schists and the associated igneous rocks. Cretaceous rocks have for the first time

been noticed in Soay Sound and Scalpay in the Skye district, and an interesting series of composite dykes of Tertiary age has been found in the Lorne plateau. The detailed mapping of the drifts in Ireland was begun in the Dublin area. Two points are cited as being worthy of special mention. The esker-like ridge south of the Liffey has been found at one point to rest on a water-worn floor of carboniferous limestone. At the same locality the gravels of the ridge can be seen to pass laterally into gravelly clay, full of scratched stones, resting on a striated rock surface. These facts strongly support the widely accepted view that ridges of this type are the casts of sub-glacial water-channels. Analyses of South Wales coals have been begun, and some notes on weathering of magnesium limestone are published.

ROYAL SOCIETY'S CATALOGUE.—The Royal Society has been engaged continuously during the past forty years in cataloguing the various scientific papers which have been issued in all parts of the world since the beginning of the last century. The original scheme of the catalogue of scientific papers provided that the papers should be catalogued only under the names of their respective authors arranged alphabetically. This "Authors' Catalogue" has now been carried down to the end of 1883, and comprises twelve quarto volumes. More recently it has been decided to prepare also a subject-index of the same papers, that is to say, a catalogue in which the papers are indexed according to the subject matter of which they treat. Considerable progress has been made with this subject index, though nothing has as yet been published. The society has spent £14,790 on the catalogue down to June last, of which the society was compelled to make up £8,529 out of its general income, the remainder having come from the Treasury and private sources. In order to complete the catalogue it will be necessary to prepare and publish a catalogue of authors for the seventeen years, 1883-1900, and to complete and publish the subject index for the whole of the past century. The council of the Royal Society are satisfied that this work must be done, and have not felt justified in refusing to undertake it. They have accordingly commenced operations, and it is hoped that the copy may be produced ready for the press in about five years. The cost will be at least £12,000. Two magnificent donations have been received, and the council ventures to hope that others may be willing to contribute towards a fund to provide for the total cost of this national work.

ABROAD.

MUSÉE D'HISTOIRE NATURELLE, PARIS.—A bust of Alphonse Milne-Edwards, by Marqueste, is to be erected in this museum.

GUSTAVE MOREAU.—A special museum is to be opened in Paris for the exhibition of the pictures of this artist, whose works are known to a very select public.

V. I. Jochelson, one of the explorers for the American Museum of Natural History, has been making ethnographical studies and collections in the Amur and Yakoust territories for two years.

Mr. Edwin C. Eckel of the New York State Museum, at Albany, has resigned in order to join the U.S. Geological Survey at Washington.

UNIVERSITY OF CHICAGO.—The zoological museum of this University has purchased the entomological collection of the late John Ackhurst, containing about 50,000 specimens.

U.S. BUREAU OF ETHNOLOGY.—Dr. W. H. Holmes, head-curator for anthropology at the United States National Museum, has been appointed chief of the United States Bureau of Ethnology in succession to the late Major J. W. Powell. Some suprise has been expressed that Mr. W. J. McGee, who has for some time past been performing the work of director, was not appointed. It is, however, satisfactory to note that no unpleasantness has arisen, and, no doubt, Dr. Holmes will make the relations between the Bureau of Ethnology and the National Museum much closer then they have hitherto been, to the great advantage of both establishments.

PEABODY MUSEUM.—Mr. J. L. Wortman has published Part I. of "Studies of Eocene mammalia in the Marsh collection, Peabody Museum" (*Amer. Journ. Science*, ser. 4, vols xi.-xiv., 1901-2). In this work the carnivora are dealt with, the ancestral relations and progressive modifications of the several families are considered, some new genera and species are described, while others are freshly defined. The author also discusses the general organisation of the carnivora, and the relationship of its more primitive members to the metatherian marsupials.

AMERICAN MUSEUM OF NATURAL HISTORY.—Writing in *Science* for 31st October, 1902, Professor H. F. Osborn summarizes the results of the explorations carried out by this museum with the aid of a fund presented by William C. Whitney, especially for researches on the evolution of the horse. The great value of the material obtained by these expeditions shows that such a mode of collecting is far more profitable to

a museum and to science than is the old hap-hazard way of taking or purchasing what comes fortuitously to the notice of the curator.

CARNEGIE MUSEUM, PITTSBURGH.—Professor Hugo Kahl succeeds Mr. Herbert H. Smith as a custodian in entomology in this museum, which has recently purchased some twelve thousand specimens of *Lepidoptera* collected by Mr. Henry Engel in western Pennsylvania. This museum has also recently purchased the collection of the birds of Holland formed by Baron Snouckaert van Schauburg and mounted by Tar Meer, the celebrated Dutch taxidermist. It numbers about eight hundred specimens, representing over three hundred species, each species being represented by both sexes in adult plumage, and in many cases by the young also. Several fossil-collecting expeditions have been sent out by the Carnegie Museum during the past year, and report a fine skeleton of *Diplodocus* from Wyoming, much material of the carnivorous dinosaurs from the Freeze-out mountains of the same state, as well as large collections of fossil vertebrates from eastern Wyoming, western Nebraska, and Montana.

NORWEGIAN MARINE LABORATORY. A project has been set on foot for the establishment of an international marine laboratory at Christiania, under the direction of Dr. Fridtjof Nansen, which it is hoped will come to fruition, for the investigation of northern seas would undoubtedly add greatly to our knowledge of marine biology, and no more suitable director for such work could be found than Dr. Nansen.

THE GEOLOGICAL COLLECTIONS OF THE BASLE MUSEUM.—In 1898 these collections were transferred to a new building, and Mr. E. Greppin, whose writings on the fossils of the Jurassic rocks near Basle are so well known, took the opportunity to overhaul the collections, and to compile a list of figured and type specimens, now just published in the *Verhandlungen der Naturforschenden Gesellschaft in Basel* (xv., pp. 25-134). The museum, founded by Peter Merian, contains many old collections that he obtained, notably those of Hieronymus d'Annone, Heinrich Bavier, Joh. Jak. d'Annone, and Hieronimus Bernoulli. The two first-mentioned afforded material for Bruckner's "Versuch einer Beschreibung historischer und natürlicher Merkwürdigkeiten der Landschaft Basel," 1748-1763. Many of J. J. d'Annone's specimens are figured in the great folios of Knorr and Walch. More recent acquisitions, remarkably rich in types, are the collections of Cartier, Gilliéron, and Koby. Mr. Greppin has arranged the material, consisting of 1768 specimens, in the chronological order of the works in which it has been described, from 1742 to 1900. The

names of the authors are—Bourguet, Bruckner, Zwinger, Hofer, Andreae, Knorr, Agassiz, Désor, P. de Loriol, Gilliéron, Moesch, Koby, and E. Greppin. The work seems to be carefully done, and should prove most useful to students of fossil invertebrates, especially those of mesozoic age.

South African Museum.—From this museum we receive another part of its excellently-produced *Annals*. But it is a little confusing to see it described as Vol. II., Part IX., containing XII., which is again divided into Parts I., II., and III. The part is in fact devoted to "Rhynchotal Miscellanea," by the eminent Rhynchotist, Mr. W. R. Distant, and comprises (1) African *Tingididae* (pp. 237-243, pl. xv); (2) *Rhynchota* from the Transvaal, Mashonaland, and British Nyasaland (pp. 244-251); (3) Descriptions of some new species from various localities (pp. 252-254). The plate is good, but lacks an explanation; and why should there be thirteen new species unprovided with illustration, when figures have been drawn for ten species long since described? The material has been derived from the museums of Capetown, Pretoria, and Stockholm, and the private collections of Mr. G. A. K. Marshall, Dr. P. Rendall, the author, and others. Rhynchota, the non-zoological curator may like to know, may be more familiarly termed "beaked insects," or, briefly, "bugs."

Another Artist's Museum, Paris.—Madame Falguière, the widow of the distinguished artist, has added one more to the Museums of Paris—the Musée Falguière. This is at the deceased artist's studio, 68, Rue d'Assas, where Falguière worked during the last years of his life; and it is well furnished with all the remaining works of the artist, both in painting and in sculpture. In the latter section there is a complete series of sketches for all Falguière's work, from the Gambetta Monument to the "Triomphe de la Revolution."

Fish Emigration.—The New South Wales Government has recently made an experiment with the object of introducing European flat-fishes to the colony. At the time of arrival of the consignment of fishes, there were alive 560 plaice, 23 soles, and one female lobster. The experiment is reported to have quite come up to the expectations of the fisheries commissioners, as, although some of the fish despatched died on the voyage out, they were looked upon only as of secondary importance in the experiment, all the special arrangements having been made to suit the plaice.

Nature's Skill.—According to a paragraph in one of the papers, a study of nature's mechanics has materially assisted in the proper adjustment of a model of a huge dinosaur. It is stated that one of the scientists, who superintended the work

of making the model of the extinct dinosaur for the Buffalo Exposition, said that considerable difficulty was anticipated in sustaining the huge armoured skull in its proper position. But when the attempt was made, there was no difficulty at all. The lines of nature were carefully followed in making the model, and it was found that the parts about the junction of the head with the neck had been so nicely balanced, that a single pin at the base of the skull was sufficient to carry it.

SCIENTIFIC CO-ORDINATION.—A resolution of the Government of India has been published stating that the Government has come to the conclusion that central authority is needed to insure that the work of scientific research in India is distributed to the best advantage, that each investigator confines his researches to the subject with which he is most capable of dealing, and that energy is not wasted by the useless duplication of inquiries, or misdirected by lack of co-operation amongst the various departments. Hence a board of scientific advice is to be formed, comprising the heads of the meteorological, geological, botanical, forest, survey, agricultural, and veterinary departments, and other scientific officers of special attainments. This board is to prepare every year a general programme of research, and a report describing what has been done. The main object of the scheme is to promote the economic development of the country. The resolution mentions the various scientific officers appointed in recent years, and says that the development of machinery in the different departments has rendered more essential than ever the co-ordination of scientific inquiry. Experiments and investigations of a similar or cognate character are being independently carried on—chemistry, economic entomology, and economic botany are given as examples—and this should be prevented. Further, it is "expected that the board will check a natural tendency on the part of the Government scientific officers to give the claims of abstract science precedence over demands of economic or applied science, which are of more practical importance."

FIRE IN THE NATIONAL GALLERY AT BUDA-PESTH.—A fire has occurred in the National Gallery at Buda-Pesth, when three valuable pictures by the Hungarian landscape painter, the late Ladislaus Paal, were destroyed. A loan collection of the works of Paal was on exhibition, several of the pictures belonging to Englishmen and Americans. The pictures destroyed were the property of an art dealer in Paris.

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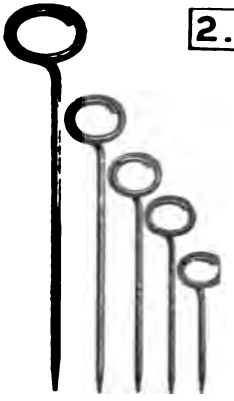

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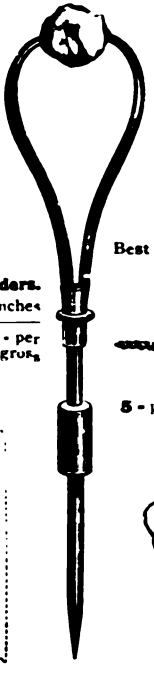

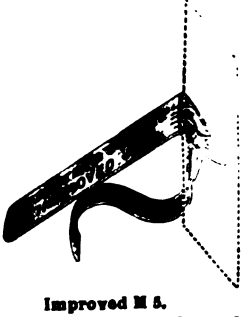

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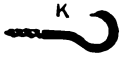		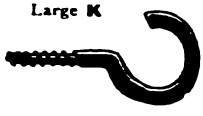
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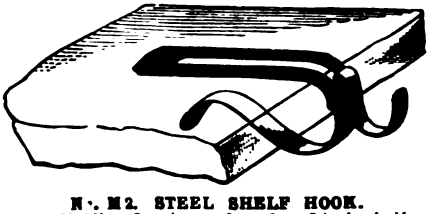

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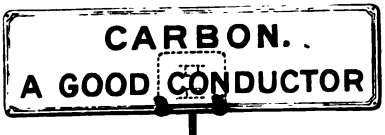

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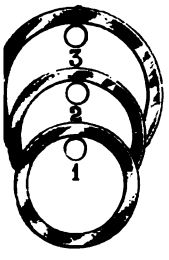

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Hon. General Secretary:
E. Howarth, Museum, Sheffield.

The object of the Association shall be the promotion of better and more systematic working of Museums throughout the Kingdom. In order to promote a better knowledge of Museums, the Association shall meet in a different town each succeeding year.

That each Museum contributing not less than one guinea a year be a Member of the Association, and that individuals interested in scientific work be admitted as Associates on payment of 10s. 6d. annually.

That each Museum be represented by three delegates, each having one vote. Each Associate to have one vote.

That each Museum belonging to the Association and each Associate receive one copy of the publications of the Association.

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THE MUSEUMS JOURNAL.

Vol. 2. *December, 1902.* *No. 6.*

Technical Museums.

BY JOHN MACLAUCHLAN, ALBERT INSTITUTE, DUNDEE.

[Paper read at the Bradford Conference, 1902.]

IN these pessimistic days of ours we are frequently assured that British Commerce no longer dominates the world, that more than one rival will soon occupy the pride of place from which we have fallen, and that the sole cause of this national calamity is our strange neglect of Technical Education. The Jeremiahs of comparative statistics, not content with denouncing our shortcomings, harrow our feelings by holding up to us as examples the erudite and scientific Teuton and the inventive go-ahead Yankee, who in the far east, the farther west, and throughout the Tropics are ousting us from our time honoured markets with goods which are at once cheaper and better than ours, pushed by skilful bagmen who can tell their unveracious tales and cajole their deluded customers in half-a-dozen languages. What chance has the poor British commercial, who can only speak his own tongue, and with whom truth has not yet got very deep in the well, against such plausible and unscruplous opponents as these? No wonder that, from China to Peru, German and American goods are supplanting British, and that we are tacitly admitting this defeat by having our great iron bridges in the Soudan and our locomotives for the Indian railways constructed by these enterprising foreigners.

And as for our marine—have we not fallen off both in quantity and quality, for German steamers have already outdistanced ours in speed, and it looks as if, at no distant date, their tonnage will be larger than ours. These things which we read and hear daily may have much exaggeration in them, but, unfortunately, they contain not a little truth. Admitting,

as we must do, the seriousness of the position, what is the cause? Does it arise from the very nature of things, and is therefore incurable, or from our insular refusal to adopt a remedy which has cured others? I rather fear that our successful rivals possess certain qualities which we are not gifted with in equal degree, and that no remedy, orthodox or empiric, will remove the solid thoughtful resourcefulness of the Teuton, or the pushful inventiveness of the Yankee. The origins of momentous changes are as a rule complex and widely rooted, and in the case we are considering one great factor is the undoubted truth that it is not we who have conspicuously fallen back, or lessened our speed or skill, but that they have greatly advanced.

Leaving all these points to be solved by those in whose province they lie, let us inquire whether in addition to their special native qualities our rivals are aided by advantages which may also be ours for the taking. Unquestionably, both America and Germany have paid far more attention to education than we have, and endowed it far more liberally; and that the earnest systematic study of science and technique by Germans has enormously assisted them in the recent marvellous expansion of their production and commerce seems beyond dispute. Well, until recently we have treated the teaching of science and technique with a quite ostentatious neglect, and even yet the startling progress made by our neighbours has hardly aroused us.

It is indeed time that we were all up and doing—all of us—not excluding the members of the Museums Association, and although it may not be our province actively to teach, we have still a specially important duty to perform which lies to ours more than to any other hands. And let me say here, that it is not of Technical College or Institution I am speaking—we have many of these, for are we not met to-day in one of the most completely equipped of all, and we have a splendid one in Dundee—but they as a rule teach and do not illustrate. Few of these have museums, without which a system of technical education cannot be complete.

Scientific and technical instruction must above all subjects be given in object lessons, and be illustrated in concrete form

by lucid examples of processes and their results, and this can only be done by a Technical Museum. Your theoretic teaching must be given in separate schools by many teachers, but it will rarely be practicable or desirable to have more than one technical museum in a city. For economical and other obvious reasons, it is desirable that such a museum, whether it is a separate institution, or a department of a larger organisation, should be administered by the staff of the public museum of the city. To be thoroughly successful it ought to be a separate institution, or a sharply defined department, because if its illustrative examples are scattered over a general museum, as they sometimes are, amidst art, archæology, and natural history, their effectiveness as teaching objects is not only greatly lessened, but serious students are distracted, if not driven away, by crowds of irresponsible sightseers. Perhaps, to paraphrase Goldsmith's line, a few of those who come to stare may remain to study, but their brethren of the crowd render study impossible.

In great museums like the Victoria and Albert at South Kensington, the national museums in Edinburgh and Dublin, or such gigantic institutions as the new palace of art in Glasgow, it is quite practicable to have large and completely isolated departments of technique, but in most country museums this is difficult if not impossible. Yet, if success in this urgent matter is to be achieved, an isolated room or floor must be reserved for quiet study. An entirely separate building would be better still, but that will be rarely obtainable. I hope I have not alarmed those brother curators, who, like myself, come from museums all too modestly endowed. A Technical Museum is such a high sounding title, that it raises up Alnaschar-like visions of an elaborately equipped institution filled with cunning models and endless specimens of all the arts and all the sciences. One might as well suggest to the, shall I say, over-paid curators, a moor in the Highlands and a yacht in the Solent.

But like mountains which at a distance look gigantic and unattainable, this mountain of ours is not so lofty, or so difficult to conquer as it appears when regarded from afar off. It would be useless folly, even if ample means were available, to

organise a gigantic technical museum in a moderate-sized town, and, indeed, our object can be perfectly accomplished by much smaller means. As a rule the smaller town has few industries, possibly only one staple one. To illustrate all the mechanism and processes of those few, or that one, and to display the newest improvements in the methods employed, are the true functions of such a museum, and that is not so very difficult of attainment. It is the very economical establishment of a small technical museum of this character which I now wish to describe in the hope that our rather pleasant experience may be of some benefit to others.

We had the temerity to begin without any funds whatever available for the purpose, but called upon the public to assist in what we assured them was a good and imperative work. Our income for the support of our libraries, art galleries, and central museum was entirely derived from the library penny rate, and was all too small. I am happy to say, we have just got a Bill authorising a two-penny rate, the first town in Scotland to attain this. Our appeal met with some effective sympathy, the town council giving us a large building standing in a park, nearly a mile from the central museum, and defraying the expense of the reconstruction necessary, and we also obtained some money subscriptions from the general public, and a large number of gifts of models, specimens, etc., from the manufacturers, engineers, and ship-builders. This building is 110 feet long and 40 high, in three floors, well lighted.

Museum buildings, old or new, are generally useful, sometimes even ornamental, but they are rarely romantic. Yet this one of ours has romance of the highest order reflected upon it, being an outbuilding of the old castle—Dudhope Castle— which was the property and residence of John Graham of Claverhouse, Viscount Dundee—the "Bonnie Dundee" of Sir Walter Scott's song; the "Bloody Claver'se" of the Covenanters. There, leaving his army at Blair Atholl, and riding by unfrequented paths through the hills one day in July, 1689, he came to spend a single night with his young wife and only child, and then rode away to fateful Killiecrankie, to

sweep the army of Dutch William headlong down the Pass. but to fall himself in the moment of victory—the last of Scottish heroes.

Besides fitting up the building for its new purpose, the town council has for three years given us grants for the support of the museum, averaging over £200 per annum, and this we supplemented from other sources. These modest amounts will show that I am describing no large and elaborate institution, but an effective, although unpretentious, attempt to illustrate the most advanced technical processes necessary for the development of our local industries. There are only four of these which can be called important—the spinning and weaving of flax; of jute; the engines and machinery necessary for these textile manufactures; and iron ship-building. Flax, once the sole industry of the town, is much less important now than the quite modern jute, of which Dundee is the chief seat. Jute is grown only in India, and every year or two the deficient rainfall causes it to be short in quantity and of poor quality. But the Indian Government maintain that there are many other Hindoo fibres quite as suitable as jute for manufacturing purposes, and they presented us with an immense number of samples of these fibres, which we prominently display. This in itself is an important service to our trade, because nowhere else can these new fibres be seen, and I hope that some of them may be soon adopted. As these alternative fibres could be used with the present machinery, that stock objection cannot be raised. Of jute itself we show numerous examples of every variety in its raw condition, and we had presented to us, by Messrs. Cox, the largest firm in that trade, two handsome cases in which the processes of its manufacture are shown with a wealth of progressive detail. Jute is the bark of a plant belonging to the lime tree order, and the variety most largely used is *Corchorus capsularis*, which attains a height of five to fourteen feet. Examples of the plant as it grows in the Indian swamps, models of the bales as sent from Calcutta, all stages of the spinning processes, and a very large number of examples of the various fabrics woven from the roughest sacking up to its purple and fine linen aspect, for jute, the cheapest of all fabrics

can be spun and woven as fine as silk—indeed it is largely used in the adulteration of the cheaper silks. There are carpets and praying cloths in resplendent colours,—for no fibre takes on dye so effectively as jute, but alas no fibre gives it off with such marvellous celerity. Fine as it can be spun, it is essentially so hard a substance that the coloured fibres and cloths are simply painted rather than dyed, as dye never permeates its substance. Yet they make of it magnificent carpets and rugs. Perhaps the crowning triumph of the manufacture of this dirt-cheap coarse *looking* fibre from Hindoo swamps is shown in one of these exhibits of Messrs. Cox—a wealth of luxuriant tresses of apparently lovely hair, golden, auburn, nut-brown, raven-black, in every variety of fantastic dressing which the keenest-eyed lady cannot distinguish from the real. What a boon to actresses who have to make up all sorts of disguises—for a few pence they will get what would cost as many pounds in hair.

In this jute section we also show many examples of the substances and machinery employed in its manufacture, such as the oils necessary for the "batching" or softening of the hard yet silky fibre; of the rotary and other brushes required; and the machinery of all kinds, including a loom with a web on it. We have also endeavoured effectively to assist its art, or what ought to be its art side, by showing in rotation an enormous number of beautiful designs in most exquisite colouring—some in chromo-lithography, some specimens of the actual cloths, as made of this and other fibres by the Hindoos before their art was degraded by European contact. These, which are to be seen in many museums, were published by the Indian Government twenty years ago, and cost something like £200. Having then subscribed for a set we transferred it to this new museum, where it is of practical as well as of artistic value. Our attempt to influence the art side of jute manufacture has been most effectively assisted by loans of textiles from South Kensington, skilfully selected by Mr. R. F. Martin, in which charming designs in beautiful colours are shown, some of the fabrics actually being jute, and all perfectly suitable for that fabric.

The manufacture of flax we demonstrate in similar manner, and have been assisted by Messrs. Baxter Bros., of Dundee—probably the largest flax manufacturers in the world. Flax is our oldest manufacture—I fancy it is the oldest in the world, exquisitely fine linens are found in the Egyptian tombs—but, at least, three-fourths of our Dundee fabrics are now jute. This great firm contribute two cases, in which they begin by showing specimens of the bonnie blue-flowered plant which once waved over our Scottish fields, but in that country is now only to be found in gardens. Here, again, all the yarns and the cloths produced are shown, from the coarsest to the finest, from the exquisite damask table-linens to the great strong canvas of the ocean liner. The machinery also, both in models and in drawings. In flax we are able to illustrate the practical manufacture in a very artistic and poetical manner. Our black and white collection in the central galleries contained a dozen line engravings of the palmy days of that delightful art—the middle of the eighteenth century. All are in the highest style, and each has a characteristic dedication to some great noble. They begin at the very beginning, the first of the series showing the ploughing of the land, and the sowing of the seed. Then follow the reaping, the steeping, dyeing, spinning, weaving, calendering, packing, and all other stages, finishing with the most important process of all, the selling of the goods in front of a stately linen hall by merchants arrayed in the picturesque garments, quaint-looking wigs, and cocked hats of the period. We hung these interesting pictures over the flax cases, and thus may the artistic always adorn the practical. More interesting than the bewigged merchants in the cocked hats are the charming girls shown assisting in the cultivation and earlier processes—quite an idyll of manufacture.

Our third local industry is, naturally, the machinery necessary for the manufacture of these two fibres—flax and jute—and this we have been able to illustrate with much fulness. From some of the largest firms we obtained models and drawings of the earlier machinery, and we also received models, drawings, and large photographs of the most up-to-date machines of all the processes. It has been arranged that

we are to receive, if not models, such drawings and photographs of every new development of machinery, so that manufacturers, their managers, and operatives will be kept perfectly up-to-date as regards all advances in the processes of our manufactures. That is the true, as it is the exceedingly valuable work of a technical museum. In this department of machinery we acquired a very large number of models, made by Mr. Cussons, of Manchester, whose models are, without exaggeration, famed throughout the old world and the new. Working models most of them are, representing almost every kind of engine and machine, so constructed as to show the exact principle on which motor power is based, and so elegantly made as to be genuine works of art. Nor are his models confined to engineering or mechanics, for we also acquired from him a series displaying the theory and practice of building construction—an art which is a staple one in all towns. Builders' apprentices learn their trades simply by rote or practice, the best master to the sharp receptive mind, but even such gifted tradesmen must learn much from the study of lucid models showing the true theories of construction, whilst to the average apprentice such studies must be invaluable. To illustrate another department of practical work now also common in nearly all cities—the application of electricity as a motor power—Mr. Cussons is presently making for us a series of absolutely new models, which I feel sure will be as valuable to the students as they will be interesting to the ordinary visitors.

Our fourth important industry—iron ship building—we have also been able to illustrate with effectiveness. On application being made to them, the shipbuilders vied with each other in sending large and beautifully finished models of ships and steamers of all sizes and character—sailing ships: ocean tramp steamers; sumptuous passenger steamers; whalers and yachts. Some of these are scaled on the sides, and in addition they sent us large and very elaborately detailed drawings of ship construction, so clear that veritably he may read who runneth.

Whilst we have thus tried to illustrate all the processes, and the most up-to-date advances in our four special indus-

tries, and in the world-wide arts of building, and electricity, we have by no means entirely neglected general technique, although we did not think it right to waste our money or our energies on industries foreign to our city. But we have, also, received gift of specimen cases showing the technical processes in the manufacture of such varied articles as cutlery, iron work, wood carving, bookbinding, stationery, printing, stereotyping, book illustration, and many other industries. Then from the Government of New Zealand we obtained a monster wall case illustrative of New Zealand flax, a valuable fibre quite different from common flax, and obtained from the leaf of *Phormium tenax*. From this fibre the natives make ropes and cloths, and the examples we show, which range from the plant itself to the most delicate linens, apparently prove it to be equal to real Balic flax. although it is not a flax, but of the order *Liliaceæ*. It grows in the poorest soil, and can be easily produced in vast quantities, but, unfortunately, the process of manufacture is much more difficult than that of flax or jute, so it is unlikely to displace these. But, whether so or not, it is in its proper place in the technical museum of a large spinning and weaving town.

I have mentioned that in our zeal for what is up-to-date we do not altogether neglect the beginning of our industries, and in the centre of the museum is placed a very imposing and deeply interesting historical relic. This is a fine large steam engine, with the sun and planet movement, made by James Watt in 1785, and employed until 1898 in a bleachfield near Dundee. It was secured for us by public subscription, a young member of our committee, Mr. D. L. Carmichael, himself an engineer, giving £100, and overhauling it and erecting it free of cost. We can set it in motion by means of a small electric motor. When this gift was announced in the newspapers, a gentleman presented copies of the fine busts by Sir Francis Chantrey, of Watts and his assistant Murdock, the inventor of coal gas, and so the counterfeit presentments of these distinguished men look down upon their own engine.

Besides showing Fine Art in this incidental manner, we also do so systematically, in a series of steel plates by distin-

guished engravers, after the work of Royal Academicians, with examples of impressions printed from them, thus showing the whole process.

On one floor of the museum we have placed a number of rather important working models of physiography—a geyser, a volcano, ocean currents, tornado clouds or water spouts, Lord Kelvin's deep sea sounding apparatus, an orrery, an eclipse apparatus, and others. These are active in the full sense of the word—the ocean currents—gulf stream and all —circulate round the globe, the water spout rises and bursts, the volcano discharges cinders, red, black, and white, and the geyser shoots up water.

The objects I have so far described are all our own property, but our mission to illustrate technique is splendidly assisted by special loan collections from the Victoria and Albert Museum, South Kensington, representing technique and crafts rather than pure art. In it are many varied and most beautiful examples of iron work; carved woods of many periods and countries, arranged in sequence from the fifteenth century to the present time; specimens of the famous hammered copper and brass work made at the Keswick school of industrial arts; embossed leather work made by students of the "Kirkby Lonsdale" and "Leighton Buzzard" handicraft classes; modern book-binding and leather work of superb design; modern Italian gesso work and pottery—the first time exhibited out of London; and a large number of choice examples of reproductions of French, Italian, and British metal work, illustrating engraving, chasing and repoussé work—arts which have been considerably practised as home work in Dundee of late years. There are also many framed examples of various kinds of craft-work and textiles, so that the technique of the more elegant handicraft is fully and splendidly displayed. The choice examples of textiles to which I have already referred are specially valuable in a town which lives by textile manufactures, and can learn much from the exquisite designs and charming colour of these South Kensington loans.

Last of all, the establishment of this museum has stimulated home work in many branches of industry, and to this we give

all possible encouragement. The ingenious persons who practice these crafts at home derive pleasure from the exhibition of their work in the museum, and, perhaps, the most valuable return possible to make to them, is the opportunity they enjoy of seeing really refined and high-class examples which they may study and imitate.

That being the museum, let me answer briefly two very obvious and pertinent questions:—To what extent is it made use of? And how is it to be sustained financially? As to the use made of it, before it was opened, and twice a year since, we sent circulars to all the engineering shops, ship-building yards, manufacturers, and industrial employers of all kinds, and to the technical, science, art, advanced, and board schools. All the employees, and all students and senior pupils were pressed to come, and special arrangements were made for them. During the autumn, winter, and spring months the museum—open daily to all—is in the evenings open to the general public only on Saturday. The other five evenings are reserved for genuine students, whether from school or works; and when they visit us, a competent assistant is present who has the models placed on tables so that the teacher or foreman in charge of the party can demonstrate from them. The physiographic models are made to work and a short descriptive lecture is given by myself or one of my staff. We have had many interesting visits of this kind, and these have been so highly appreciated that this most important part of our work goes on increasing.

Then as to financial support, we were fortunate in having on our committee one of the then magistrates, Bailie Mathers, who had been himself an engineer and fully understood the whole subject. To his influence and to that of Lord Provost M'Grady, then our chairman, we owe the reconstruction of the building (which cost the Town Council nearly £1,000), and the annual grants of about £200, which, with moderate contribution from the library funds and private citizens, we have found not altogether inadequate. I was fortunate in having on my staff assistants able to do the classification and

intellectual work, and our expenditure has been entirely for caretakers, cleaning, lighting and heating, and, of course, for the purchase of models.

Undoubtedly we could do a great deal more and attain much higher efficiency if we had ample funds, but then our example would have been of no value to those whose resources are as limited as our own. When Lord Balfour of Burleigh had his Secondary Education Bill in the House of Lords, appropriating for that purpose the large educational funds wasted all over the country, I wrote, pointing out to him that his proposed teaching of science and technique would fail if there were not illustrative museums, that perhaps the management of these naturally fell to the civic public museum authorities, but that it was ludicrously impossible that the small penny rate on which libraries and most public museums entirely depended could also sustain a technical museum; and that, as every school could not possibly have an illustrative museum, the most economical way would be to give a grant from these educational funds to the managers of the public museums. Lord Balfour sent a courteous reply, and I had hopes, but the vested interests proved too strong for him, and the Bill was withdrawn. Might not the English museums approach in a similar manner that other member of the Clan Balfour—the leader of the House, who has a similar Education Bill in hand, and seems to be in a somewhat yielding mood at present?

Let me end as I began, by stating that this Technical Museum, which I have attempted to describe, is no great and far reaching institution, but a very modest and humble attempt to solve a pressing problem, It is precisely because it is so small, so modest, and so cheap that it is of value to my brethren.

History of the Sunderland Museum.

BY JAS. M. E. BOWLEY, CURATOR.

THE following particulars were compiled in the Jubilee Year of the museum under the corporation: –

At a special meeting held in the Old Arcade, under the presidency of Dr. Brown, on the 17th November, 1836, the Sunderland Natural History and Antiquarian Society was formed. The president of the original committee was the Right Hon. the Earl of Durham, G.C.M., Mr. J. Reed being secretary and Mr. R. Vint, treasurer.

This Society at once set to work to collect objects for a museum, which was at first accommodated in the passage of the Subscription Library, afterwards in the rooms of the Literary Society in Villiers Street, and eventually under the wing of the Literary and Philosophical Society in the Athenæum. In 1845 an Act was passed by the Legislature permitting the establishment of museums under municipal authorities; and on the 20th of May, 1846, the corporation of Sunderland resolved, on the motion of Councillor Thompson, seconded by Councillor Lindsay, to establish a museum of art and science for the instruction and amusement of the inhabitants of the borough, a committee being appointed to make the necessary arrangements.

On the 22nd of June, the same year, the Natural History Society resolved to transfer its museum to the corporation. Mr. R. Vint having also presented it with his splendid collection of mineral specimens, valued at £100; Mr. E. Backhouse with a valuable collection of birds, and various local gentlemen with other valuable gifts. The nucleus of the present Borough Museum was formed and shortly afterwards opened to the public for their inspection in the Athenæum. Since then the Museum has been gradually extended, until it is now one of the best in the Northern Counties.

At a special Council meeting held on the 10th September, 1877, on the proposition of Ald. Haswell, seconded by Councillor

Museum Reports and Papers.

BOARD OF EDUCATION. Regulations relating to Museums and Institutions (From 1st August, 1902 to 31st July, 1903).

This gives the list of the staff attached to the Board of Education, with the regulations and notes concerning the Victoria and Albert Museum, the Bethnal Green Museum, the Geological Museum, Jermyn Street, and the Royal Col eges of Science and Art, together with the syllabuses of instruction of the latter. The new regulation regarding loans to provincial museums is printed on page 7 and is as follows; ".....In the case of Museums, the applicants are required to pay, in respect of the expenses, a fixed charge of fifty shillings for each van needed to convey the objects to the Museum, and to defray any local expenses; any cost of carriage, other than local expenses, not covered by the fixed charge being borne by the Board."

REPORT OF THE COMMITTEE OF THE NATURAL HISTORY SOCIETY OF NORTHUMBERLAND, DURHAM, AND NEWCASTLE-UPON-TYNE. 1901-1902.

The Durham College of Science wishes to erect in the museum grounds a block of buildings for the teaching of natural science in connection with the museum, the college finding the money and providing the staff, thus utilizing the valuable material belonging to the Society in its teaching. There seems no reason to any ordinary mortal why objects got together for the purpose of instruction should not be used in that way, though some of the members appear to think that that is to be carefully guarded against. There has been a large number of donations of books and specimens, the most important being a collection of local Diptera by the Rev. W. J. Wingate, a set of the Cheviot rocks from Miss Spence, works on natural history bequeathed by the late Dr. Thomas Pigg, a set of Burmese butterflies by Col. Adamson, and a set of diagrams illustrative of Egyptian archæology by Mr. R. C. Clepham. Mr. E. Leonard Gill, the new curator, reports that an extensive overhauling of the contents of the

museum has taken place, and the ethnological and geological collections have been re-arranged, the honorary curators have given practical help, Mr. Daglish re-writing the labels in the mineral collection, Mr. Graham in arranging the collection of British birds' eggs presented by Mr. Raine, and Mr. Meek in examining and identifying the animal remains of the Roman and prehistoric periods in the museum. An admirable guide is published by the Society at one penny, giving the general arrangement of the contents. In the first room, Zoology, are a series of proofs of the woodcuts by Thomas Bewick; room 2 contains the famous collection of British birds formed by the late John Hancock; room 3 has a very complete set of the fossils of the coal measures and Permian rocks; and the East Corridor contains a fine collection of ethnological specimens. An appendix traces the history of the museum from 1770.

REPORT OF THE COMMITTEE OF THE BLACKBURN FREE LIBRARY, MUSEUM, AND ART GALLERY. 1st August, 1901, to July 31st, 1902.

The buildings have been painted and decorated throughout. The art gallery has had presented to it, by Mr. Bowdler, "The Good Samaritan," by P. R. Morris, A.R.A. There is very scant reference to the work of the museum, the bulk of the report being devoted to library matters.

THIRD ANNUAL REPORT OF THE COMMITTEE OF THE PLYMOUTH MUSEUM AND ART GALLERY. March, 1902.

There has been steady progress shewn in all departments. Two important pictures have been purchased: "The Letter," by Stanhope Forbes, A.R.A., and "When one is old," by Walter Langley, R.I. A series of popular lectures have been given during the winter months. A total of 45,721 people visited the museum, a daily average of 126. Mention is made of the advisability of obtaining a grant annually from the town council towards the purchase of pictures, because "a really good modern collection will never be secured from gifts and bequests alone." A popular penny guide is issued. Mr. Buddicom, B.A., F.G.S., has resigned the curatorship, and Mr. E. E. Lowe, F.L.S., was appointed to the office in October, 1901.

COUNTY BOROUGH OF BOLTON. Guide Book and Catalogue of Exhibits at the Hall-i'-th'-Wood Museum, opened July 23rd, 1902, by W. H. Lever, Esq.

The name of this museum and the spelling thereof should be a joy to the unsuspecting foreigner. Such a peculiar name, which is, of course, certain to have a distinguishing local pronunciation which no outsider is likely to understand, will not convey any intelligent meaning; and though there is always a charm about local place-names which appeals at any rate to the student of folk-lore, and may be comprehended by the local man in the street, yet, as the museum has been really established as a form of memorial of Crompton, the inventor of the spinning mule, it might be desirable to associate his name with it, or at any rate to give it a name that would have a general distinctive meaning, and not be a mere local colloquialism. In the *Journal* for August, 1902, page 68, reference was made to the acquisition of this ancient building of the Tudor period, which, through the generosity of Mr. Lever, was presented with other objects of interest to the town of Bolton. Considering the purpose of the museum, it is natural that cotton and its uses should have prominent attention, and Room 1 is devoted to cotton and its manufacture; Room 2 has an exhibition of local textiles; Room 3 is furnished as a sitting-room in old furniture and decorations; Room 4 is known as Crompton's room, and is the place where he built his first "mule," and has various relics of him and his family; Room 6 is furnished in the style of a seventeenth century bedroom. An interesting account of the history and owners of the hall, and a biography of Samuel Crompton, is included in the guide, which is well illustrated. We congratulate Bolton on its latest museum.

THE MANCHESTER MUSEUM, OWENS COLLEGE. Report for the year 1901-1902.

This museum, one of the best in the country, is a standing witness of the advantages attaching to the union of a museum with a living, working, and active teaching university, every year is marked by some improvement and the work is always of a high standard. Many additions have been made, the chief being a collection of shells from Mr. R. D. Darbishire, an

extensive collection of minerals, rocks, &c., presented by the Rev. A. Dixon, and ethnological specimens from Mrs. Leech. A valuable series of lectures and demonstrations was given during the year, and the material at hand made fullest use of. Appendix I. contains extracts from the report on the university colleges of Great Britain. We can personally testify to the justice of the compliments paid therein to the museum authorities, and endorse the statement, "We know of no museum in which the teaching value of the collections is greater than that of the Manchester Museum." Appendix II. is a list of donors and gifts; Appendix III. is a list of papers, &c., relating to the museum; Appendix IV. gives a list of the lectures and attendances thereat; Appendices V. and VI. deal with the accounts.

PRE-HISTORIC ANTIQUITIES OF THE BRADFORD DISTRICT, by Butler Wood.

This is an admirable example of local exploration. Round most large towns are similar areas which are well worth attention. There are three areas where most of the pre-historic remains of the district are to be found—Rombalds Moor, Baildon Moor, and Harden Moor. A sketch is given indicating the position of the principal objects. Flint weapons and implements, bronze weapons and ornaments, burial places (both barrows and stone circles), earthworks and pit dwellings, have been discovered, but no traces of palæolithic man. Many inscribed stones, especially with the mysterious cup and ring markings, probably of religious character, exist. Of the curious pit-dwellings, fifty, enclosed by an entrenchment, are to be seen near Addingham Moor. The illustrations are excellent, and the whole account is well written, and deserving of careful study.

SOME PREHISTORIC CAMPING GROUNDS NEAR BRIGHTON, by Herbert S. Toms.

This is a reprint of a paper read before the Brighton and Sussex Natural History and Philosophical Society, in which is recorded the discovery of flints and other stone implements, some of which are illustrated. Full details are given as to the localities where finds have been made.

GOVERNMENT OF MADRAS. Report on the administration of the Government Museum and Connemara Public Library for the year 1901-1902.

During the year there were 410,436 visitors to the old building and 398,822 to the new building, the largest number in one day being 94,239. and the smallest number 3, valiant souls who ventured through a cyclonic storm on Dec. 9th, which brought 10·3 inches of rain to the city. The superintendent made two tours collecting ethnological material, his operations were regarded with great mistrust and were vaguely connected with subscriptions to the Victoria Memorial, plague inoculation, recruiting for the Transvaal war, and a surmise that he was an official tailor. The following publications were issued: Bulletin, Vol. iii, No. 3, Nayars of Malabar, F. Fawcett. Bulletin, Vol. iv, No. 2, The Dravidian head; Yanadis of Nellore; earth eating; the couvade; steel yards, &c., Catalogue of the collection of prehistoric antiquities, R. Bruce Foote, "The pride of the collection is unquestionably the great series brought together by the late Mr. J. V. Breeks during his very successful exploration of the Nilgiri cairns and barrows." Monograph on the ivory carving of South India, E. Thurston. A large number of additions was made to the collection, amongst them being an interesting set of paintings by native artists after the canons of Western art, some neolithic celts from Upper Burma, which are considered very valuable as medicine, and are sold for two or three rupees each, and many old coins. The white ant is a perpetual source of trouble. The whole report is full of interest.

HARVARD UNIVERSITY MUSEUM.—Its Origin and History by Alexander Agassiz, LL.D., Director.

This is an address delivered at the opening of the Geological Section of the museum, June 12th, 1902, and forms an interesting record of the trials and difficulties successfully encountered by the illustrious Professor L. Agassiz, a pioneer in museum work from the year 1850. The work of the museum is one of continued scientific activity, the list of publications comprising 35 8vo vols. of the Bulletin and 25 4to. vols. of Memoirs, this is satisfactory proof of the energy displayed, and the high character of the researches followed is beyond question.

THE DETROIT MUSEUM OF ART. Annual Report, 1901.

Our transatlantic cousins are usually too busy to spend much time on art matters; but doubtless as the strain and seeking after wealth have met with success, more effort will be devoted to the amenities of existence. "The growth of art in all ages has been of necessity a slow one; and we can only hope that as the city grows in wealth and culture, this side of our work may increase in activity, and become what its friends most earnestly wish for": a hope which is abundantly justified by the number of visitors—134,076—during the year A series of special exhibitions has been held, various lectures given, and a series of Sunday talks on art and kindred subjects given by the director. The number of gifts attests the interest of the citizens in this rising museum.

SMITHSONIAN INSTITUTION. Report on the Department of Geology for the year, 1899-1900. From the Report of the United States National Museum for 1900.

The curator states that so far as the acquisition of material is concerned, the progress made in this section is without parallel in the history of the museum, more especially in the meteorite collection, which has acquired the private collection of Prof. Charles U. Shepard, and also the stone, weighing 64 lbs., which fell at Allegan, Michigan, July 10th, 1899. The curator has devised a set of labels, in regard to which the following observations are made: "It need scarcely be said that the first necessity of a label is legibility. Brevity and concisement of statement are also important considerations. The head curator's experience has led him to doubt the advisability of long explanatory labels for individual specimens, excepting, it may be, in the case of large and striking objects. The name of the object in type sufficiently large and clear to catch the eye, and a few explanatory lines in smaller type, regarding source, etc., are considered the chief essentials. After many trials the form given here, printed on a gray board, which experience has shown to be little affected by exposure, has been adopted in the sections of Geology, Invertebrate Paleontology, and Paleobotany:—

DIAMONDS.—Cape Bort.

KIMBERLY MINES, SOUTH AFRICA. 53,671.

Diamonds of this size and quality are used in making engravers' points and burnishing tools for watch and pencil case makers. Four pieces; weight, three-eighths karats each.

GALENA.—Sulphide of lead. A cluster of crystals showing both cubic and octahedral faces.

JOPLIN MINE, JOPLIN, MISSOURI. 17,590.

Gift of Davis and Murphy.

Some idea of the cost of obtaining material is given by the statement that the best specimen of *Brontosaurus* in Prof. Marsh's collection, an imperfect one, cost him 10,000 dollars, (£2,000). The report is made exceedingly interesting by nine illustrations of cases and various parts of the museum.

THE WILSON BULLETIN. No. 39. June, 1902.

The first paper, with an explanatory map, "Bird Studies in Lorain County, Ohio," by Lynds Jones, is an admirable monograph of winter study of bird life, with a list of local species. "A Preliminary List of the Birds of Yakama County, Washington," by William Leon Dawson, records 123 species, and indicates several other probable ones not recorded. "The Incubation Period of the Mocking Bird," by John W. Daniels, Jun., deals with the author's own observation, from the first finding of the half-completed nest on April 29, to the vacation of the nest by the young on June 2, the actual time of laying and the hatching of each egg being recorded, the length of incubation being thirteen days. There are various other ornithological notes.

General Notes.

AT HOME.

Dr. Walter de Gray Birch, who was long at the head of the manuscripts department at the British Museum, and for twenty-two years secretary of the British Archæological Association, has been appointed librarian and curator to the Marquis of Bute, whose library and collections of pictures are very extensive and valuable.

On the 3rd December, at the age of eighty-two, there died Mr. John Hungerford Pollen, who from 1864 to 1876 was official editor of the Science and Art Department, examiner for the Department, and a member of the committee for the selection of purchases for the Department's museum at South Kensington. When he resigned his official post, he was appointed private secretary to the Marquis of Ripon, and was well known as an authority on painting and a writer on art in general.

YORKSHIRE NATURALISTS' UNION.—Most of the museums in the northern and midland counties of England are interested in the work of this Union, which has done so much to foster the study of natural history, and to preserve the animals and plants of the large sphere within its operations. Mr. W. Denison Roebuck, F.L.S., who has been secretary to the Union, and editor of its official publication, *The Naturalist*, for more than 18 years, has just resigned those positions, and at the forty-first annual meeting, which was held at the Royal Institution, Hull, on October 10th, the members marked their appreciation of the great services he had rendered by making him a presentation, consisting of an illuminated address, in book form, a timepiece, and two ornamental vases. The illuminated address, which bore the names of various officers, past and present, was a beautiful work of art, with very appropriate illustration, the border of each page having a circular central picture of some picturesque spot within Yorkshire, while above and below it was a coloured illustration of a plant or animal. Although Mr. Roebuck has relinquished the positions of secretary and editor, he in no way slackens in his interest in the work of the Union, and he has been elected President for 1903. Mr. Thomas Sheppard, F.G.S., of the Hull Museum, has been elected secretary, and in future *The Naturalist* will be under the joint editorship of Mr. Sheppard and Mr. Thomas W. Woodhead, F.L.S., of the Technical College, Huddersfield.

LECTURES TO CHILDREN.—The following paragraph from the *Yorkshire Post* bears gratifying testimony to the success of the lectures at the Leeds Museum, which have been specially designed for school children, as described in the *Museums Journal*, vol. i., pp. 179-80. It also shews how outsiders may assist in extending the advantages of these lectures to scholars in the rural districts outside the big towns by bearing the travelling expenses of the children, and further stimulate them by offering prizes:—"Marvels of Bird Life," the title of the lecture which Mr. Crowther is giving at the Leeds Philosophical Hall, has already been heard by nearly 3,000 school children of the city, and it is expected that the future audiences which will confront the curator will total up to over 9,000, or an average of 400 for each of the whole series of addresses. The idea, which originated last year, of interesting the young in the subject of natural history has thus been more successful than was anticipated. After listening to Mr. Crowther, many of the children return to the museum and inspect the specimens of bird life, which have been specially arranged in cases. Another gratifying feature is the excellent quality of the papers which are sent in by the scholars. The essays reveal receptiveness, intelligence, and reasoning powers which would do credit to older people. The other day Mr. Crowther gave his lecture at the museum before the children attending the Altofts Church and Colliery Schools. Their travelling expenses were borne by Messrs. Pope and Pearson, and Mr. W. E. Garforth offered several prizes for the best papers. Some of the youthful essayists filled seven pages of foolscap.

NOTTINGHAM CASTLE.—A local workman, in Nottingham, has bequeathed the sum of £2,000, the savings of a life-time, for the erection of memorials to local poets. These are now being executed in the famous castle of the town, amongst them being busts of Lord Byron, Henry Kirke White, and Philip James Bailey.

IRISH GOLD ORNAMENTS.—Mr. W. S. Gilbert himself hardly ever conceived any more Gilbertian situation (says the *Westminster Gazette*) than that the Treasury should be the plaintiff and the British Museum the defendant in an action—to be tried in the London courts next term—the object of which is to determine whether certain prehistoric gold ornaments found in Ireland should not be handed to the Dublin Museum by the British Museum. The gold ornaments were found in an Ulster bog, were bought by a Munster antiquary, and sold by him to the British Museum. The matter has been in debate for a considerable time, and the Prime Minister has now informed Sir Thomas Esmonde, M.P., that the legal

aspect of the case is to be tried as stated in the next term. As to the result, whoever secures the gold ornaments the taxpayers must bear the whole cost. The Treasury, it may be worthy of note, favours Ireland in the matter of the gold ornaments.

DUBLIN MUSEUM DEMONSTRATION.—The anuual series of demonstrations in the Dublin Museum for the session 1902-1903 was opened by Colonel Plunkett, director, who took as the subject of his remarks the changes which had lately been effected in connection with the arrangement of the exhibits in the museum in the groups to which they respectively belonged. Having explained the general system of arrangement, Colonel Plunkett proceeded to refer to the changes which had taken place in the collections during the past year. Within that period the museum authorities had added a section for the display of enamels, and a further section for the display of Egyptian antiquities. In both sections they had secured some very interesting exhibits, and, slowly as they were advancing, it was something to their credit to have added two new sections during the year that had just gone by. Colonel Plunkett then shewed the members of the party who had assembled to hear his remarks through the two new sections to which he had referred, his remarks upon the various items in these departments being listened to with keen interest by the visitors. The new collection of enamels is one of a particularly interesting character, and embraces several very fine specimens of workmanship of Greek and Roman design. Incidentally, Colonel Plunkett drew the attention of the visitors to a very fine specimen of a brooch, modelled upon the old Irish style, which is on exhibition quite close to the new enamel collection. The brooch was presented to her late Majesty, Queen Victoria, upon the occasion of her visit to Trinity College in 1849, and in May of the present year was presented to the museum authorities by His Royal Highness the Duke of Connaught.

NATURE STUDY AT THE EAST END LONDON.—There was a very large gathering at the beginning of this month of elementary teachers and others interested in educational questions, in the art gallery adjoining the museum, Whitechapel. The meeting had been convened by the Libraries committee, who were anxious to secure the co-operation of the teachers in their endeavour to develope the work of the museum in connection with nature-teaching in the schools in the East-end. A good deal of work has already been done in this direction, courses of demonstrations on animals, plants, the natural history of the months, &c., being arranged by the curator to illustrate lessons given in schools, and special

exhibitions illustrating these and cognate subjects are held periodically, to which teachers send their classes. The chief business was an address by Mr. A. D. Hall, the director of the Rothamstead Experimental Station. He had found nature study a unique educational instrument in a small village school, where he had taught the children to observe their everyday surroundings, and thus link on to their school life the life they would lead when they went out into the world. How things live and grow was a subject of stimulating value, and attention should be given to the processes that make up the life of a plant. But the whole value of the work must stand or fall by its result or non-result in developing the mind of the child. The lecturer suggested that nature-lessons should be correlated with the general work of the school, for example, with arithmetic, by taking weights and measurements of the natural objects they studied or experimented on. He also insisted on the necessity for cultivating habits of observation; it was a difficult matter to teach children—and, for the matter of that, men and women—to see and observe; but the effort must be made, and they should be taught to record their observations in drawings or diagrams, however rough, rather than by notes.—Some discussion followed, in which, while the general principles were accepted, doubt was expressed as to the wisdom of attempting to correlate nature-teaching with other subjects. The tone of the meeting was decidedly in favour of the endeavour of the libraries committee to extend the usefulness of the museum, and of the establishment of a centre for nature-teaching in the Winter Garden of the People's Palace. Thus far it was an unqualified success; and it will probably result in the formulation of some definite scheme by which these objects may be accomplished.

GUILDHALL ART GALLERY, LONDON.—The valuable collection of modern English pictures, which was lately bequeathed to the corporation of London by the late Mr. Charles Gassiot, has been placed in the Guildhall Art Gallery. The ceremony of formally opening was performed by the Lord Mayor on December 1. The collection was described in the *Museums Journal*, vol. ii., pp. 67-8; and although it was in the first instance left to Mrs. Gassiot during her lifetime, that lady has generously waived her rights under her husband's will, so as to give the public the benefit of Mr. Gassiot's generosity at once. There are 112 pictures altogether, their value being estimated at about £60,000. They are all oil paintings of the modern British school, with the exception of eight or ten. They begin with Constable and Nasmyth, and come down to the work of men who are still in their prime; but the majority are of the middle of the nineteenth century—say between 1840 and 1870.

WEDNESBURY ART GALLERY, ENGLAND.—Major E. H. Smith has presented to this art gallery a number of gold medals and Diamond Jubilee coins.

DAMAGE TO A PICTURE AT HULL ART GALLERY.—It was reported at a meeting of the Hull corporation art committee that one of the pictures on exhibition in the Municipal Art Gallery had been seriously damaged, having been cut evidently with a pocket knife. The committee resolved to offer a reward of £10 for the discovery of the offender.

ART GALLERY FOR DUNFERMLINE.—As a result of a recent Arts and Crafts Exhibition, at Dunfermline, it is proposed to establish a permanent art gallery in the town.

PAISLEY MUSEUM.—The Paisley Free Library and Museum is to be extended at a cost of £7,000, from plans by Messrs. Honeyman Keppie and Mackenzie.

GLASGOW EXHIBITION.—After meeting all expenses in connection with the Exhibition of 1901, there remains a free surplus of £30,000, to which has still to be added any sum which may remain from the realisation of the Exhibition buildings, after the cost of the restoration of the grounds is deducted. It will be remembered that the substantial sum realised from the previous exhibition formed the nucleus of the fund for the erection of the present art gallery, and as it was one of the most attractive features of last year's exhibition, it would be an appropriate application of the present surplus to use it for increasing the art treasures of the gallery. All exhibitions are not quite so successful as those of Glasgow, for the one at Wolverhampton this year resulted in a loss of £34,000.

EXHIBITION OF OLD SILVER.—An interesting collection of silver table-plate of the seventeenth and eighteenth centuries was opened on December 8th, in the Fine Art Society's Galleries, 148 New Bond Street. Many of the pieces are the property of private persons who have kindly allowed them to be exhibited. Mr. Percy Macquoid has not only lent his valuable collection of tankards, wine beakers, knives, forks, spoons, &c., but has supervised the selection, arrangement, and cataloguing of the exhibition. Collectors are also indebted to him for an extremely informing note which he has written and prefaced to the catalogue. He will, doubtless, in many cases add a new interest to an attractive hobby by the light he sheds on the historical aspects of the silver table-plate industry. Among other things he points out that while forks were introduced in Italy during the latter part of the fifteenth century for meat, the fashion of eating with a fork was at first regarded with much contempt, and it was not until after the middle of

the seventeenth century that a few sets are found to have been in existence. The exhibition includes that which is supposed to be the earliest four-pronged London hall-marked fork known. It is lent by Mr. E. Dent, and is dated 1681. There are also included the, with one exception, earliest English hall-marked wholly silver set of forks known. These are lent by Mr. Macquoid, and are dated 1698 and 1701. Mr. Macquoid tells us that sets of knives were not common till the beginning of the seventeeth century, and that the handles were usually of agate. Some good specimens of French make are shown, and there are also two sets of what are known as sabre-blade knives, which came into use at the end of the seventeeth century. The spoon, was, of course, invented many centuries before either the table knife or fork, and Sir John Evans lends one of Roman make found at Little Horwood, Bucks, and belonging to the third century. Apostle spoons and seal-headed spoons are shown in considerable numbers, most of them dating back to the sixteenth century. Included also among the exhibits are many quaint and interesting specimens of candlesticks, beakers, porringers, salvers, tankards, caudlecups, &c. A collection of French, Dutch, and British silver, lent by Mr. J. M'Niell Whistler, and one of Maltese and Italian silver, by the Rev. George Smith, chaplain to the forces, are also among the attractions of the exhibition, which is to remain open for about six weeks.

ABROAD.

VICTOR HUGO MUSEUM, PARIS.—This museum, in the Place Royale, which is to be inaugurated on the anniversary of the birthday of the poet, will be decorated by the paintings of various distinguished artists. MM. Henner, Detaille, Dewambez, and Rochegrosse have been commissioned to depict scenes drawn from the works of the master.

MUNICH MUSEUM.—The museum containing the natural history collections of the State of Bavaria in the Alte Akademie, Munich, is closed for a large part of the months of December and January, owing to the installation of a new system of central heating. We understand, however, that the collections will again be accessible to students shortly after the middle of January, 1903.

K.K. NATURHISTORISCHES HOFMUSEUM, VIENNA.—Hofrath Franz Steindacher, the director of this museum, is to be the leader of an expedition starting in January, 1903, for Paranagua in Brazil, whence the members will proceed to the study of the fauna of the hitherto unexplored districts of Piauhy and Maranhao. Dr. A. Penther, of the same institution,

will accompany the party as entomologist, and Othmar Reiser, a custos of the Bosnian Museum at Sarajevo, as ornithologist. The expedition is the fifth of those paid for by the Treitzsche Stiftung.

THE NATIONAL MUSEUM OF HUNGARY.—The centenary of the National Museum in Budapest was celebrated last month in the presence of the Archduke Joseph Augustus, representing the King, of all the Ministers, and of nearly all the members of Parliament. The museum is practically the foundation of Count Stephan Szechenyi, the great patriot, who also founded the Academy of Science and the National Theatre; but the entire nation contributed towards the erection of the splendid building, still the finest in the capital, in which the constantly growing collections are housed. It is significant of Hungarian ways that in 1848 the aristocracy and gentry of the country voluntarily taxed themselves for a number of years for the benefit of the museum fund. It was from the steps of the National Museum that Petoefi, on March 15, 1848, declaimed his poem, "Up, ye Magyars!" which inaugurated the Revolution, and the great hall of the building was, up to a few days ago, the House of Magnates. The museum has only four hundred thousand books and some three hundred thousand coins and antiquities, but its collection of Roman tombstones has been declared by Professor Mommsen to be extremely fine; the meteorites, of which the museum has the largest store known, are renowned; and the ethnographic section is astonishingly rich for a country that has no colonies. Most valuable of all, however, are the manuscripts, including very early and rare codices, of which the principal specimens, now separately exposed to view, are the admiration of *savants* from all countries who have accepted the invitation to the festivities.

THE MUSEUM OF EGYPTIAN ANTIQUITIES AT CAIRO.—The new building of this museum was opened by the Khedive on November 15th. Lord Cromer, Lord Kitchener, the Ministers, the Sirdar, and many European and native officials were present. The whole collection has been arranged in the new building under the supervision of the director, Dr. Maspero, and the curator, Enil Brugsch Bey.

INDIAN ART AT DELHI.—Considerable progress has been made with the building where Indian art will be displayed at Delhi. It will be an imposing structure. The site has been excellently chosen, on rising ground just outside the Cashmere Gate of the city. Descending from the building to a small stream is a series of terraced gardens, watered by fountains, and having here and there picturesque mosques. Designed in

the Indo-Saracenic style, the building is well over two hundred feet long. The façade is divided into three parts, and the main entrance to the exhibition will be through arches between octagonal towers seventy-five feet high. The front is being covered with white plaster, touched with gold in places; blue and white Multan tiles are being used in the decoration of the panels in the towers and the spandrils between the arches. The main entrance leads to a broad vestibule, and thence to the centre of the principal gallery, which runs the whole length of the building, and is two hundred feet long, thirty feet broad, and twenty-four feet high. Here will be the great display. To obtain exhibits, Dr. George Watt and his assistant, Mr. Percy Brown, have been in communication with lovers of art in all parts of India. More than one hundred cases are now arriving daily at Delhi. At the western end of this great hall will be a house front with gallery, brought bodily from Bhurtpore, and re-erected in its original materials. In arranging the exhibits, Dr. Watt has been concerned not so much with provinces and states as with the material forming the basis from which the article is made. Gold, silver, copper, brass, iron, wood, stone, and textiles will all have their respective sections. Walls will be devoted to the illustration of various styles of Indian architecture; and the schools of art at Bombay, Madras, and Lahore, and the Government of Burma will each decorate and furnish a small room in its own particular manner. The Viceroy will declare the exhibition open on the 30th of December.

INDIAN RELICS.—According to the *Mandalay Herald*, some interesting archæological specimens were added during the past year to the Lucknow Provincial Museum, being nothing less than some genuine ashes of Gautama Buddha. The relics were discovered in 1898, by Mr. Claxton Peppe, in a stupa, at Piprahwa Kot, in the Basti District. Piprahwa is 11 miles south of Kapilavastu, the capital of the Sakyas, and the relics came out of a stone coffer which remained buried there for nearly 2,400 years, containing among other things, the ashes of Gautama Buddha, which the Sakyas of Kapilavastu had taken from the funeral pyre of the Great Teacher as their share of his bodily remains. As the Indian Museum, in Calcutta, was the most suitable place for their deposit, the Government of the United Provinces caused the bulk of the relics to be forwarded to Calcutta, requesting the authorities of the Imperial Mueum to send sets of duplicates to the Provincial Museums.

MUSEUM OF THE GEOLOGICAL SURVEY OF QUEENSLAND.—In the Annual Progress Report for the year 1901, the Government Geologist states that many fresh mineralogical and

palæontological specimens have been added to the museum, including two large slugs of tinstone, one weighing 4 cwt., and one 2½ cwt., and said to be the largest slugs of tin ore that have been found in the state. The museum's space is getting too small and many interesting specimens have to be packed away in boxes. The number of visitors to the museum during 1901, was 10,953.

ODESSA UNIVERSITY.—A fire, which broke out at this university on November 26, has completely destroyed the valuable collections in the geological museum. A watchman, whose body was found hanging in one of the rooms, is supposed to have been the incendiary.

THE HEDIN COLLECTIONS. - The natural history collections made by Dr. Sven Hedin on his recent travels, have been presented by him to Stockholm's Högskola, where those made on his previous journeys are also preserved. The geological collection includes 800 rock specimens, affording excellent material for the preparation of geological maps of portions of Central Asia. These are now being worked out and the maps prepared in the College. Work on the botanical collection, chiefly in the form of dried plants, has hardly been begun as yet owing to the difficulty of deciphering the labels, which are in Russian and similar difficult languages and require the personal attention of the explorer. Among the zoological specimens are skeletons and skins of *Equus hemionus*, *Camelus bactrianus ferus*, *Bos grunniens ferus* (wild Tibetan yak), *Ovis ammon*, *Pseudovis nahura* (the bharal), *Gazella picticaudata*, *Pantholops hodgsoni* (the Tibetan chiru), *Ursus pruinosus*, and species of *Cervus*, *Lepus*, *Lagomys*, and *Arctomys*. Besides these are spirit collections of fish, Crustacea, Mollusca, &c., but the names of these have not yet been determined. The working out of these valuable collections will occupy several specialists for a considerable time, and it is hoped that some additional money grant may be made for the purpose. Stockholm's Högskola, which corresponds to what we might term a university college, has no separate building of its own, but occupies the upper floors of a large block, and in two or three of its rooms the present museum is housed. Whether the addition of Dr. Hedin's collections will necessitate an increase of space we do not know, but they should, at least, suggest the need for better precautions against the risk of fire.

Correspondence.

82, ECCLESALL ROAD, SHEFFIELD,
1st DECEMBER, 1902.

To the Editor of *The Museums Journal.*

Dear Sir,—While Dr. Bather confines himself to the peculiar naming of those departments in which he has such profound knowledge, we may accept his dictum without hesitation, but in those relating to commercial matters, with which he quite obviously has less acquaintance, he is not so safe a guide. Thus, when in the *Journal* for November, page 141, he tells us that there is no soda in soda-water, it is certain that he must be in the habit of drinking a strange brand of this harmless fluid, and of obtaining his supplies from a very inferior pharmacist. Ordinary soda-water contains from five to thirty grains (usually five) of sodium bi-carbonate, but in London "club" soda-water contains an equival nt amount of sodium chloride. This is theoretically supposed to improve the brandy which is occasionally added to it. Effervescent citrate of magnesia is really citro-tartrate of soda, which statement is usually printed on the label when sold, and though it contains no magnesia, it does contain citric acid, and, unless kept too long, effervesces with great fizzings. Briar belongs to a great class of words in English, in which the sound has ruled the spelling according to English orthography, and which does not affirm that the substance is what we call briar, but is merely the English phonetic equivalent of the French *bruyère.* Similar examples are "Shotover" for *Chateau vert*, "Bearpark" for *beau repaire*, and many others exist.

Yours faithfully,

JOHN STOKES.

82, ECCLESALL ROAD, SHEFFIELD,
1st DECEMBER, 1902.

To the Editor of *The Museums Journal.*

Dear Sir,—With reference to the Bergen Meeting, may I suggest that 1906 would be a suitable year? We might have the meetings arranged as follows: 1904 Norwich, 1905 Cardiff, 1906 Bergen. This would allow those members like myself, who contemplate going to Burgos to see the solar eclipse in 1905, an opportunity of attending the Association meeting, which could not be done if in that year it were held at Bergen.

Yours faithfully,

JOHN STOKES.

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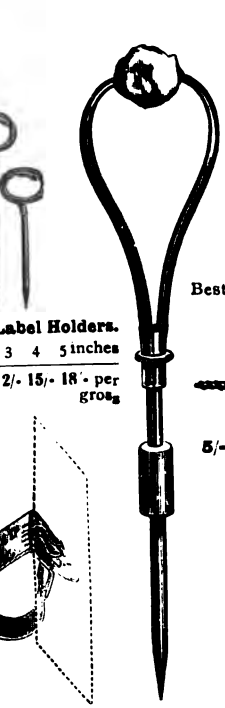

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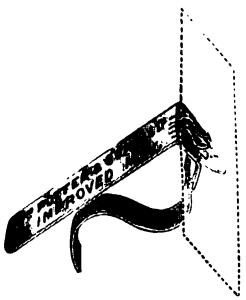

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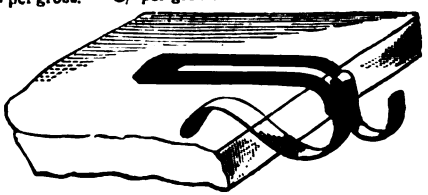

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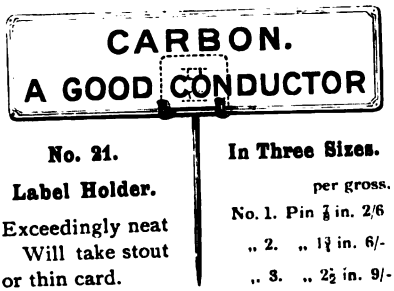

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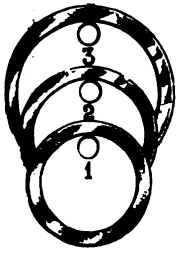

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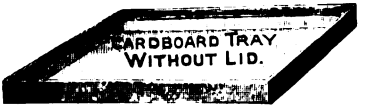

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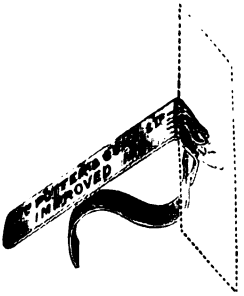

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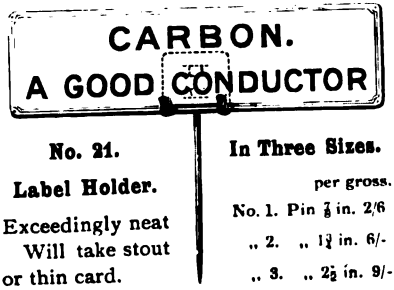

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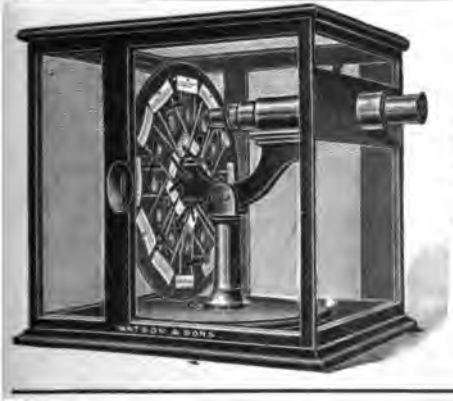

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Vol. I., July, 1901, to June, 1902.

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The object of the Association shall be the promotion of better and more systematic working of Museums throughout the Kingdom. In order to promote a better knowledge of Museums, the Association shall meet in a different town each succeeding year.

That each Museum contributing not less than one guinea a year be a Member of the Association, and that individuals interested in scientific work be admitted as Associates on payment of 10s. 6d. annually.

That each Museum be represented by three delegates, each having one vote. Each Associate to have one vote.

That each Museum belonging to the Association and each Associate receive one copy of the publications of the Association.

That a General Meeting of the Association be held annually, for the transaction of business, the reading of papers, and the discussion of matters relating to Museums.

MUSEUMS ASSOCIATION.

Some of the earlier volumes of the Report are nearly out of print, and Museums requiring complete sets should order them at once. Particulars can be obtained from the Secretary, Museum, Sheffield.

THE MUSEUMS JOURNAL.

Vol. 2. *January, 1903.* *No. 7.*

The Dutuit Bequest to Paris.

BY the magnificent bequest of Monsieur Auguste Dutuit, Paris has become possessed of a collection that will worthily occupy the palace in the Champs Elysées that formed the home of art in the Paris Exhibition in 1900, when it was known as the Petit Palais, and is now intended to represent in France what the Victoria and Albert Museum does in London. This new art museum is to be called "Le Palais des Beaux Arts de la Ville de Paris"; but, although receiving this municipal title, its purpose will be to illustrate Fine Art generally, and it could have no better foundation on which to build up its collections than the well-selected, extensive, and comprehensive legacy of Mons. Dutuit. The museum was publicly inaugurated on December 11, by the President of the Republic, in the presence of a large and brilliant assemblage. Mons. Dutuit died in Rome on July 11, 1902, and on the 16th Monsieur de Selves, Prefect of the Seine, was informed that he had left to the City of Paris not only the whole of his art treasures, but also a part of his fortune; so that no time has been lost in making this boon available to the public. This was in accordance with the will of Mons. Dutuit, who made it a condition that the bequest must be accepted within two months of his death; another condition being that within another two months it must be available for the inspection of the public. Fortunately a suitable casket was ready for the display of these art treasures, and the energy of the Director of the Petit Palais, M. Georges Cain, ensured compliance with the time limit, the removal and display of the collection being accomplished within the specified time. It will not be possible here to give anything like a detailed account of this collection, but as it has a deep interest for all concerned with art museums, it may be useful to attempt to furnish some idea

of its general scope, while referring those who desire fuller particulars of it to an excellent article, with numerous illustrations, which occupies the whole of *Les Arts* for December, where it is also announced that a history and description of the collection is about to be published by Goupil and Co., to subscribers, for 1,000 francs.

The elder brother of the donor, Eugène Dutuit, originated the collection, which was first started in 1832; and afterwards, with his brother Auguste, he travelled throughout Italy, visiting public and private galleries. Eugène then settled down in France, while his brother Auguste resided chiefly in Rome. Having at their command an immense fortune left to them by their father, the two brothers had all the means and qualifications needed to take full advantage of the opportunities offered by sales, at which for many years they were well-known figures. Those were the days when collectors with knowledge were able to secure art treasures for moderate means, and it would be a tantalising revelation in these days to know the comparatively low prices for which works of old masters were secured, say forty or fifty years ago.

M. Auguste Dutuit was a native of Rouen; and the collection was stored in that town, for it was at no time available for inspection, and in later years many of the objects purchased in various parts of the world were never unpacked after they reached their owner's house at Rouen. The collection was exhibited at the Paris Exhibition of 1878, when it attracted great attention from the amazing variety of the objects, every period being represented by characteristic works. Since then it has been largely added to, and only a very few intimate friends have been privileged to see these later additions, for the owners had a strong dislike to opening their house even to specialists and connoisseurs. They had a special dread of damage by handling, which caused them often to leave the objects untouched after they reached their house, so the public display of their treasures comes as a delightful treat for all alike.

Although in the first instance the brothers Dutuit were attracted by the works of Italian artists, their own personal tastes, which were somewhat severe and ascetic, led them to acquire

works of the Dutch and Flemish School; and amongst the pictures may therefore be found some choice works of Teniers, Ruysdael, Terburg, Hobbema, Van de Velde, Metsu, Ostade, Pieter de Hoogh, Mièris, and others. One of the early purchases was a portrait of Rembrandt, by himself, which formed the centre for an aggregation of Dutch pictures of inestimable value. There are also a few French and Italian pictures, amongst them being a good Pater and a Boucher; and there are several fine drawings by old masters, as well as hundreds of etchings by Rembrandt, Albert Dürer, Schöngauer, Callot, and all the great masters of the graver and etching needle. Beautiful books had a passionate attraction for the elder Dutuit, and the collection is consequently specially rich in illuminated MSS. and in precious examples of binding. The finest of all these is the fifteenth century MS., *Histoire du Grand Alexandre*, one of the choicest illuminated MSS. in the world, being graced by 218 miniatures, so finished and brilliant in colour and execution as to be almost inconceivable. Amongst other MSS. are the *Breviary of the Minorite Friars*, purchased at the Bedoyère sale in 1861; the *Hours of the Virgin*, from the Henri Bordes collection; the *Relation des Funérailles d'Anne de Bretagne*, with numerous other celebrated MSS.; while amongst the choice bindings are many finished and gilt like a reliquary, such as the *Xenophon*, from the Solar sale, bearing a medallion head in relief of Henri II.; the *Phénomènes d'Antoine Mizauld*, with the arms of Francois I.; or *Œuvres de Trallien*, with the monogram of Diane de Poitiers. Indeed, the books and MSS. attest the true bibliophile, include works that have belonged to illustrious owners, that are sumptuously bound, or of which the various *ex libris* recall the famous book-lovers of the last century.

Decorative art naturally afforded a wide field for the discriminating taste and acquisitive means of the brothers Dutuit, and scarcely any material to which art can be applied is absent from their museum. Eugène Dutuit, the elder of the two brothers, was the most catholic in his tastes, his desire evidently being to gather together the choicest works in all branches of art, so that they might serve as stimulating examples for all time.

Amongst the collection of pottery and enamels are some of the rarest forms of French art, amongst them being three pieces of the sixteenth century ware known as Saint-Porchaire (or Henri Deux) ware, of which only sixty pieces are supposed to be in existence. One of the Dutuit specimens is a candlestick, with the usual incised and incrusted decoration in russet and brown, with three little nude figures supporting the shaft. The other two are water vessels, with the incrusted patterns, one in red and the other in black, the latter being a famous piece bearing on a small shield the pelican badge of the De Marney brothers, who were printers at Poitiers in the sixteenth century. This celebrated little jar cost 32,000 francs, at the Spitzer sale. Of Palissy ware there are good examples of every characteristic of this strange and interesting production; while the cases of Sêvres porcelain contain some rare and remarkable specimens. A case of Limoges enamels contains examples from the thirteenth century onwards, and there are also some specimens of Champlevè enamels, including two reliquaries of the twelfth century, in the form of triptyches.

Italian pottery is represented chiefly by the noted works of the sixteenth century. Dishes from Faenza, Urbino, Gubbio, Dureta and Castilla, as well as exquisite examples of Venetian glass.

There are numerous examples of Hispano-Moresque and Rhodian plates, the finest specimen being a shallow bowl, Hispano-Moresque, decorated with two female figures. This piece, painted in blue, with gold lustre, is extraordinarily brilliant.

Italian sculpture is represented by marble bas-reliefs and glazed terra-cottas from the school of Luca della Robbia. Other works of art of the middle ages and Renaissance comprise wood-carvings, diptychs, croziers, ivories, goldsmith's work, and enamels. Furniture is not a striking feature of the collection, most of it belonging to the eighteenth century, and though pleasing as a whole, it is not of first-rate quality.

The series of antiques, particularly of Egyptian work and of Greek and Roman bronzes, of vases, Tanagra figures, and coins, presents a particularly remarkable assemblage of rare examples, acquired chiefly by M. Auguste Dutuit, whose lengthened residence in Rome enabled him to take part in the

numerous excavations there. Bronzes, disinterred from French soil, are also numerous; and there is a fine series of painted vases rich in specimens of great interest.

In the history and description given in *Les Arts* for December, from which the above particulars are chiefly taken, it is stated that the whole of the Dutuit collection occupies five rooms in the southern wing of the Petit Palais overlooking the Seine. Three of them, contrived by dividing the long semi-circular gallery by thin partitions, contain the pictures, besides the antiques, the mediæval *objets d'art*, and those of the Renaissance—goldsmith's work, enamels, ivories, jewels, and the few specimens of French furniture. In the two large outer rooms, looking over the gardens, are the prints and drawings, the illuminated books and bindings.

Some interesting particulars are given of the brothers Dutuit, the younger being apparently a misanthrope, with a contempt for the world and all personal comfort, no evidences of his great wealth being visible during his life except in the vast sums he spent on his hobby. When Eugéne Dutuit died in 1886, the vast fortune of which he had been the trustee and manager devolved upon Auguste. Up to that time the wealth left by their father had remained undivided the common property of the two brothers and of their sister Héloise Dutuit, a third of the income being regularly paid to each. The sum total of Auguste Dutuit's inheritance was 17,000,000 francs in money, and he was able to ignore all personal luxuries which the possession of such wealth would in most cases have induced, always living in the most frugal way, adding to the collections which he and his brother had jointly formed. And from the way in which his possessions were dealt with it was quite obvious that he was really laying up treasures for the benefit of mankind generally, preserving them so carefully from harm that he did not allow himself the pleasure of inspecting them, his spirit being that of the true collector who only desires to obtain the best of everything in those departments he has specially chosen, and then finally submitting to the judgment of his fellows, who are left to the full enjoyment and criticism of his life-work.

Bradford's New Museum.

IN view of the important part which the suggested arrangements of the Cartwright Memorial Hall, Bradford, occupied at the last annual conference of the Association, it will doubtless be interesting to readers of the *Journal* to have the opportunity of seeing Mr. Butler Wood's report to his committee on the subject. Mr. Butler Wood has kindly supplied us with a copy, and we are glad to be able to publish it.

Report on Discussion respecting the Character of our future Museum.

With the approaching completion of the Cartwright Memorial Hall, the importance of deciding upon the character and scope of the Museum Section is becoming more apparent, and the necessity more pressing. Having this in view, I took advantage of the visit of the Museums Association to Bradford in July, and read a paper having for its object the raising of a discussion on the character of our museum, which I imagined would prove useful to the committee when it came to consider this important question. The paper set forth in the simplest terms the character of the building, the amount of the accommodation available, and the nature of the material already in the hands of the committee.

As was anticipated, the discussion, joined in by the ablest museum directors in the country, proved to be most valuable and instructive; and foreseeing the importance of the occasion, I had a careful record of the proceedings taken, so that the committee might have the paper and the discussion together.

On analysing the speeches, it will be found that certain lines of policy have been indicated, and for convenience I have attempted to group them. Before doing so, it will be well to point out that all agree in deploring the limited space available for museum purposes, and many of the suggestions were made with a view of making the best of this deficiency. The

suggestions may be brought roughly under two heads, namely, those in favour of a Museum of Natural History, and those in favour of a Museum of Ethnology, Archæology, and Art.

Natural History.

Those who discussed this subject were agreed that in case a Natural History Museum was formed, it should be on the lines of a type collection—that is, a collection of objects that shall exhibit types of the various forms of organic life, instead of one which attempts to shew every species.

Two reasons were given for this suggestion; first, the space required would not be so great; and, second, it would prove of more educational value to the visitors. Assuming a type collection should be agreed upon, there was a concensus of opinion that this should be supplemented by a section devoted to the natural history of the locality, which should be made as full and complete as possible.

The discussion on the natural history phase of museum work was provoked mainly by the fact that a certain amount of natural history material is already in the hands of the Committee, but it was pointed out that this circumstance of itself does not make it imperative that a natural history museum should be formed. Other gentlemen urged the formation of a

Museum of Ethnology, Archæology, and Art.

This was defined as an attempt to show by means of the best examples available the progress of man's civilization from his earliest and rudest efforts to the highest developments of his art.

Mr. Vallance, the curator of the Museum of Science and Art, Edinburgh, urged this point with so much force that I quote his remarks in full. He said:—

"I understand there is to be in this building a picture gallery, and does not this fact strike the keynote of what the whole arrangement should be? Would it not be better, seeing the upper storey of the building would be given to the highest efforts of man in the realm of art, to place the building in such a way as to lead up to that development. I

do not like the incongruities of a mixed museum. In Edinburgh the natural history collections are walking into the tapestries and becoming so overlapped with the art collections that elephants and sixteenth century art are mixed together. In such a grand building as the Cartwright Memorial Hall there is an opportunity of making something unique in the way of a museum. It is open to the museum to develope into an institution with a character of its own which should make it honoured, or, on the other hand, it might become a general muddle.

"I think therefore that the Bradford committee should have some key to guide their action. Why not try to establish a museum which shall illustrate, from the earliest times to the latest, the development of man's civilization, with exhibits which could go from Palæolithic times down to the present day? Exhibits which would illustrate the difference between civilized and uncivilized conditions, and show the rise of man from the lowest manifestations of intelligence.

"A few carefully selected specimens would give all the steps in this history of civilization. There would be no difficulty in the matter if Bradford were willing to spend money upon it, and it is worth while, for the Bradford Museum would then stand forth to the whole country as having a special purpose, as a model institution, and not a mere 'mix up.'"

I have been much impressed by Mr. Vallance's contribution to the discussion, and his weighty words should be carefully pondered before a final decision is arrived at.

In addition to the subjects already alluded to there is another one of importance, namely, that of

Local Antiquities.

This would include the exhibition and preservation of paintings, prints, drawings, manuscripts, medals, weapons, and other objects of historic interest connected with the city and its immediate neighbourhood.

On the importance of carrying out this scheme all were agreed. It was also pointed out that such a collection would fall in naturally with the scheme propounded by Mr. Vallance.

In writing my paper I was greatly influenced by two facts, first, the possession of a goodly number of natural history specimens, and secondly, the existence of a feeling amongst the scientific people of the city in favour of a natural history museum.

Nevertheless, after weighing up the body of opinion expressed during the discussion, I have come to the conclusion that a museum on the lines suggested by the curator of the Edinburgh Museum would be the best to establish, inasmuch as such a museum would have a harmonious relationship to the work of the art gallery, whereas in the case of a natural history museum such a relationship would be entirely lacking. The abandonment of the idea of the natural history scheme would doubtless cause disappointment to many interested in the subject, but I have no doubt in my own mind that the attempt to exhibit the progress of the civilization of man from his earliest efforts to the highest products of his art, is the most satisfactory and logical scheme that the Committee can adopt.

British Museum Publications.

REPORT ON THE COLLECTIONS OF NATURAL HISTORY MADE IN THE ANTARCTIC REGIONS DURING THE VOYAGE OF THE "SOUTHERN CROSS." London: Printed by order of the Trustees, 1902.

The expedition of the "Southern Cross" was fitted out by Sir George Newnes, Bart., in 1898, and it sailed from the Thames on the 22nd of August in that year, reaching Hobart Town on the 28th of November. After a fortnight spent in Tasmania, the ship sailed for Victoria Land on the 17th of December, but the attempt to reach there was not successful, owing to the ice-pack, which hemmed in the ships for forty days. Then a second attempt to penetrate to Cape Adare was succesful, the landing party making this their winter residence. The scientific staff consisted of Mr. Nicolai Hanson, the zoologist; Mr. Hugh Evans, assistant zoologist; and they were supported by Lieutenant Colbeck, Mr. Louis Bernacchi, Dr. Klovstad as the surgeon, and Mr. Anton Fougner. Mr. C. E. Borchgrevink was in command of the

expedition. Mr. Hanson died in October, 1899, and Professor Lankester, Director of the British (Natural History) Museum, in his preface, states that "either from want of knowledge or want of care on the part of the survivors, his collections suffered considerably." The seals, of which there were a large series, were sent home in brine, packed in tubs, not labelled in any way, and the few leaden tickets attached were corroded. The memoir on the white seal, which Mr. Hanson prepared, and which would undoubtedly have added much to our knowledge of this animal, was lost by some mischance on the voyage home.

Sir George Newnes has presented to the British Museum the first set of all the specimens collected, and by his direction duplicates have been distributed amongst various museums and public institutions in Great Britain and abroad. A second set of specimens has been sent to the Christiania Museum.

Dr. Bowdler Sharpe has superintended the publication of the memoirs on the Vertebrata, while Professor Jeffrey Bell has edited those on Invertebrata. The first memoir deals with the Mammalia, by Captain G. E. H. Barrett-Hamilton, the seals naturally taking a foremost place, many of these being collected while the ship was locked in the ice-pack. Besides the elephant seal (*Macrorhinus*), which for its valuable commercial properties has been nearly extinguished, there are four other species of seal known in the Antarctic regions, and specimens of all these species (both skins and skulls) were obtained by this expedition. The greatest rarities were the skins and skulls of Ross's seal (*Ommatophoca rossi*), while Weddell's seal (*Leptonychotes weddelli*) was poorly represented, and of the leopard seal (*Ogmorhinus leptonyx* there is only one skin and skull. Of the white seal (*Lobodon carcinophagus*) there were several skins and skulls. A general account is given of the group of seals, then each genus and species represented in the collection is described, and full particulars with measurements of each specimen are given. There are a number of illustrations which are exceedingly poor, and lend very little aid to elucidating the text. The second paper in the book, by Edward A. Wilson, M.B., gives notes on Antarctic seals, and is intended to take the place—as far as was possible—of the

notes made by Mr. Hanson, which were lost after his death. Following these are some "Extracts from the private diary of the late Nicolai Hanson," which extend from September 15 1898, to September 24, 1899, and contain valuable original notes on the mammals, birds, and other animals which he saw. This is the most original, and will probably prove the most valuable, of the contents of the book, making it all the more regrettable that Mr. Hanson's more expanded accounts of some of the animals he secured or observed have not been preserved.

The Birds are dealt with by Dr. R. Bowdler Sharpe, who gives an interesting account of the penguins, petrels, albatrosses, gulls, and skuas; a large number of skuas of several species and of various ages being obtained, none of which are new to science.

The Fishes are described by G. A. Boulenger, F.R.S., who says, "Leaving out a few fishes obtained on the way to the Antarctic region, as well as a number of others, the decomposed condition of which precluded any attempt at identification, the collection consisted of about two hundred specimens, referable to sixteen species, eight of which are new, two belonging to undescribed genera. A new genus has been founded for four of these species, which are respectively named *Trematomus newnesi*, *T. borchgrevinki*, *T. hansoni*, *T. bernacchii*, a nomenclature which shows more desire to flatter the individual than to help the scientist. To the genus *Notothenia* two new species are assigned, viz.: *N. nicolai*, and *N. colbecki*, further attempts at immortalisation, the first name being rather an absurd attempt to perpetuate the first name—Nicolai—of Hanson. Two other new genera founded on specimens collected by the Southern Cross expedition, are *Gymnodraco*, the sole species assigned to it being *G. acuticeps*, of which five specimens were obtained at Cape Adare; and *Pleuragramma*, with one species, *P. antarcticum*, which is founded on several specimens in very bad state of preservation.

Professor W. A. Herdman deals with the Tunicata, of which there are not many species. The latter remark applies to most of the other invertebrates, and the cryptograms, of which a few specimens were brought home, as also some of

the Antarctic rocks, which are reported on by Mr. G. T. Prior, M.A. Scattered through the book are a number of illustrations which in no way add to its value, and the general impression left by a perusal of the book is an unpleasant feeling that much valuable material and labour have been wasted. Probably Sir George Newnes has long since realised that the expedition might have brought forth much more abiding fruit if he had taken steps to organise it with greater scientific completeness, and included a sufficient staff (after allowing for the hazard of such perilous regions) to gather the full fruits of their labours. With regard to the description of such specimens as reached the British Museum, the work has been fully and well done in this volume, while the series of over fifty plates at the end of the book are of the greatest excellence, being most valuable in realising the exact species described, those from plate 2 to plate 10 being beautifully coloured figures of seals, birds, and birds' eggs.

CATALOGUE OF THE COLLECTION OF BIRDS' EGGS IN THE BRITISH MUSEUM (NATURAL HISTORY). Vol. II., Carinatæ (Charadriiformes—Strigiformes), by Eugene W. Oates. London, 1902.

This second volume comes just a year after the first one, which was the beginning of an attempt to catalogue properly a group of objects in the museum that had never been dealt with before, for the only official catalogue of birds' eggs that had previously been published was one prepared by the late Mr. G. R. Gray, and issued in 1852, which treated only of the eggs of British birds, giving a list without any history of the specimens. In the two volumes prepared by Mr. Oates, full descriptions of the eggs are given, followed by a list of the specimens and their origin. The first volume dealt with the *Ratitæ*, of which sixteen species and seventy-three specimens were described; and of the *Carinatæ*, from the cranes to the gulls, the total number of species included in the catalogue being 520, of which there are in the museum 12,156 eggs. This second volume goes on with the *Carinatæ*, beginning with the plovers and going on to the owls, thus completing the series enumerated in Sharpe's Hand-list. There are 726 species dealt with, and the eggs number 14,998. The work is continued in the same manner as in Vol. I., and there are a

number of coloured plates at the end. Mr. Oates is evidently carrying out his work with great care, without any undue delay; and the prospect of a reasonably early termination of this important catalogue, which opens out quite a new treasure-house to ornithologists, will be cordially welcomed.

HANDBOOK OF INSTRUCTIONS FOR COLLECTORS, issued by the British Museum (Natural History), with Illustrations. London: 1902.

How to collect and preserve all classes of animals which the traveller may meet with in any part of the world is tersely set forth in this little book, which ought to stimulate all travellers, whether civil, naval, or military, to enrich their national museum, while adding fresh interest to their own lives. The skinning and preserving of animals and birds are explained with clear brevity, and illustrations are given shewing the methods and tools. A list is given of the mammals which are in danger of extermination, or are specially wanted in the museum collections. It is advised that when practicable, reptiles, batrachians, and fishes should be preserved in spirit, the best way of dealing with the specimens to ensure the preservative penetrating it, being set forth for each class. Insects, as forming the most numerous of all animals, as well as displaying such an endless variety of form, call for careful attention in collecting and preserving them, and nothing has been overlooked in the instructions here given. All the other invertebrates are in like manner dealt with, the book embracing every likely suggestion that may aid any intelligent collector to secure suitable specimens. It is a clear, succinct, comprehensive companion, too small to be ever in the way, and too valuable to be ever away from the naturalist and collector.

GUIDE TO THE CORAL GALLERY (PROTOZOA, PORIFERA OR SPONGES, HYDROZOA, AND ANTHOZOA), IN THE DEPARTMENT OF ZOOLOGY, BRITISH MUSEUM (NATURAL HISTORY). 1902.

This is quite a model little guide, as it ought to be, coming from such a great institution. In some seventy pages, with numerous clear illustrations, the reader is able to comprehend the scientific arrangement, and some of the beauty of these simple yet important forms of animal life. A series of twenty plates at the end of the guide shews some of the more striking

and beautiful forms, the impressions being particularly good. Probably it is these plates that have caused the price of the guide to be fixed at a shilling, which is rather a big price for such a limited section of the museum, especially as the guide, from its popular character, appears to be primarily intended for the ordinary visitor. At the same time more advanced students may obtain much useful information from it.

Rare Specimens for the American Museum.

THREE specimens of rare interest have just been made ready for exhibition in the department of vertebrate palæontology in the American Museum of Natural History. These specimens have been prepared under the direction of Adam Hermann.

The first is the complete skeleton of a small dinosaur which has been named "the bird catcher," owing to its apparent capacity for great speed and the long slender grasping nature of the hands.

The second specimen is the great fossil fish *Portheus molossus*, secured by Charles H. Sternberg, in Kansas, in 1900. This object is sixteen feet in length, has been mounted on a large panel, and the missing parts have been restored with the greatest care in light coloured plaster, so that there is no mistaking the restored for the original portions of the specimens.

The third exhibit is the superb pair of *Elephas imperator*, secured from Texas last year. The tusks are thirteen feet six inches in length, and twenty-two inches in circumference. The entire upper portion of the skull has been restored in white plaster. The specimen has been mounted with a view to shewing the actual height of the skull in an animal of corresponding size.

Reports have been made to this same department, which is under the charge of Professor Henry F. Osborn, of the work of the different expeditions sent out by it during the summer of 1902. The first party went to Montana, near Miles City, seeking remains of horned dinosaurs. Barnum

Brown was in charge, associated with Professor R. S. Lull, of Amherst College. They found a skull which lacked the upper portions of the horns only, and which has a notably complete frill. Portions of the skeleton also of the same animal and of other horned dinosaurs, and the remains of a carnivorous dinosaur of gigantic size were found. In addition, three crocodile skeletons and portions of skeletons of several beaked lizards were discovered. Another expedition went to Montana under Dr. W. D. Matthew in search of mammals, especially of the miocene period. He made two important discoveries. The first discovery was of beds containing the remains of some smaller animals of the period in which the titanotheres flourished, small carnivores and rodents, and, most interesting of all to the layman, some primitive species of horse, among them the *Mesohippus westoni*. This party also found the lower jaws and extensive portions of the limbs and skeleton of a large rhinoceros, a long-limbed genus which had been known hitherto from its skull and single foot bone only. This discovery makes it possible to give the complete characters of this type of beast, which stands in marked contrast to the abundant short-limbed and short-skulled rhinoceros of the same period, known as the *Teleoceras*. The third expedition of the department went to the famous Bone Cabin dinosaur quarry, in Central Wyoming, for the fourth year of excavation. Especially valuable finds of remains of the giant herbivorous dinosaur *Camarasaurus* were made. Altogether, fifty-two boxes of specimens were gathered here, many of which are entirely new to the museum's collections. The search for fossil horses, upon the fund provided by William C. Whitney, was continued by the fourth expedition sent out, under the leadership of Professor J. W. Gidley, who has made many important discoveries in this line. A brilliant discovery was made in South Dakota of the remains of a small herd of fossil three-toed horses, belonging apparently to the genus *Hipparion*. Parts of numerous fore and hind limbs, in a perfect state of preservation, and one skull and an associated skeleton so complete that it may be mounted, were also secured by Professor Gidley.

The department of mammalogy and ornithology ot fhe museum has recently received a valuable collection of mammals from the neighbourhood of Repulse Bay, Arctic America, obtained by Captain George Comer. This collection contains a fine series of Barren Ground caribou, musk oxen, and such smaller animals of the region as wolverines, arctic foxes, weasels, arctic hares, and various specimens of lemmings. This collection of mammals is regarded as of special value to the museum, as being the first to be obtained from the mainland of Arctic America bordering on Hudson Bay.

News has been received at the museum from the Andrew J. Stone expedition, which is now collecting in Northern British Columbia. Up to the time the last reports were sent in there had been collected thirty large mammals, consisting of bears, foxes, wolves, mountain sheep, mountain goats, moose, and caribou, as well as about eight hundred small mammals.

General Notes.

AT HOME.

ART CRAFTS EXHIBITION AT SHEFFIELD.—In connection with this exhibition, which was open for four months at the High Hazles Museum, Sheffield, a number of prizes were distributed in December, twenty of the exhibitors each receiving a silver medal and a money prize. It is proposed to hold a similar exhibition in the summer of the present year.

METAL-WORK EXHIBITION IN GLASGOW.—An exhibition of art metal-work, promoted by the museums and art galleries committee, has been opened in the People's Palace, Glasgow. In past years various forms of art handicraft by present-day students have received special attention at this institution on Glasgow Green, the corporation wisely bringing before the people of this industrial part of the city examples to show the beauty of work, and the present exhibition will no doubt appeal attractively and usefully to the art-workmen and citizens of Glasgow. As an encouragement to the exhibitors, several prizes have been awarded.

ZOOLOGICAL SOCIETY'S SECRETARY.—Dr. P. L. Sclater, F.R.S., has resigned the position of secretary to the Zoological Society of London, which he has held for over 40 years.

Many of the members of the association will remember the useful and practical paper which Dr. Sclater read before the Association when it met in London, an abstract of which is published in the Report for 1893, pp. 95-103. He dealt with the "Typical Forms of Vertebrated Life, suitable for Exhibition in Local Museums," giving tabulated examples, such as might form the complete vertebrate equipment for a small museum, or serve for an index collection in larger institutions. It hardly comes within the scope of this *Journal* to refer to his work in connection with the Zoological Society, and all zoologists recognise the great value of the publications issued by this society, which contain such a large amount of Dr. Sclater's original work Besides the literary work of the society, Dr. Sclater was in great measure responsible for the management of the menagerie and gardens in Regent's Park, and the research work which he organised there, carried out by the prosector, has added greatly to the knowledge of the anatomy of numerous animals. It is stated that the council of the society proposes to separate the two functions and to place the management of the Zoological Gardens under a separate director, who shall be directly responsible to the council for the care of the animals and gardens. This seems a perfectly proper and natural division of duties, for the work of the gardens has grown enormously since Dr. Sclater was appointed, and it has no direct relation to secretarial work, while there is room for many improvements which a separate official may be able to inaugurate. For sucessor in the post of secretary and editor, the council has, by a bare majority, decided to suggest to the fellows the name of Mr. W. L. Sclater, M.A., F.L.S., Director of the South African Museum, Capetown. The election will take place at the annual general meeting in April, and is to be contested by many prominent fellows. Dr. Chalmers Mitchell, who was, we understand, the candidate selected by the special committee appointed to investigate claims, has consented to stand as the nominee of the dissenting fellows.

ADDITIONS TO THE NATIONAL COLLECTIONS, LONDON, 1902. —The trustees of the National Gallery have not as yet announced their decision anent the pictures bequeathed by the late Lord Cheylesmore and the late Mr. Charles Gassiot, the latter of whom left over one hundred works. The famous "Colonna Raphael," belonging to Mr. Pierpont Morgan, is merely on loan; and, apart from this, there have been acquired only a Church Interior, by Peter Saenredam, 1597-1665, a Portrait by Jordaens—neither artist hitherto represented; a Study of Dogs and Dead Game, by Jan Fyt; and an early portrait, by Romney, of Mr. Morland of Cappelthwaite, standing in a

landscape. To the Millbank collection, which, too, is under the control of the National Gallery trustees, there have been added Mr. Watts' "Court of Death," "From the Dorsetshire Cliffs," by the late J. Brett, A.R.A., presented by his widow, a landscape by J. W. Allen, a bronze bust by Professor Lanteri, given by some admiring pupils. Public acknowledgment is due to Mary, Countess of Cavan, for her generosity in offering to the National Portrait Gallery the only known authentic portrait in oils of John Bunyan. The portrait is by Thomas Sadler, and was painted in 1684, when the "tinker and author" was 56 years old. A presentment of Charles Lamb, ascribed to Henry Meyer, is an interesting addition to those already possessed from the hands of William Hazlitt, Robert Hancock, and Francis S. Cary; a water-colour portrait of Turner, by himself, dating from 1792, has been presented by friends of the late Mr. Cosmo Monkhouse, in order to perpetuate his memory; the ordinary rule has been waived in the cases of Mr. Watts' "Marquis of Dufferin and Ava," given by the artist, and of "Sir Arthur Seymour Sullivan," painted by Millais in 1888, bequeathed by the sitter; while a presentment of the late Dean Milman has been given by his three sons. The superb assemblage of mezzotint and other engravings has, by a codicil in the will of the late Lord Cheylesmore, gone to the British Museum instead of to the National Portrait Gallery. These prints cannot yet be examined, nor can many of the acquisitions alluded to below. If only for the long series by John Sell Cotman, mention must be made of the collection of drawings by artists of the Norwich school, formed by Mr. James Reeve, and bought last spring. Among the additions to the library are a Pestilence Tract of 18 leaves, from Machlinia's press, c. 1484; and Oliver Goldsmith's "Prospects of Society," which Mr. Quiller-Couch, in an article in *The Daily News*, proved to be a "muddled proof" of "The Traveller." The Prince and Princess of Wales have deposited on permanent loan in the British and Mediæval Section the savage curios presented to them during their recent tour through the Colonies; "the friends of the British Museum," an anonymous body whose generosity warrants recognition, have again been active; and, not to go farther, the Hon. Walter Rothschild, M.P., has given one of the finest carved elephant tusks ever brought from Benin. Of many additions to the Victoria and Albert Museum, South Kensington, we can mention only a fine panel of stained glass, representing the Adoration of the Magi, from the Cathedral at Cortona, attributed to the 15th century craftsman, William of Marseilles, procured at the Bardini sale for £1,180; and the bronze statuette of St. John the Baptist, by Auguste Rodin, the French sculptor, presented by a committee of his admirers.

HULL MUSEUM.—The Municipal Museum, Hull, has just added to its treasures a collection of moths, which represents the life work of Mr. N. F. Dobree, F.E.S., of Beverley, and is confined to the European Noctuae. The collection has been formed by Mr. Dobree partly on his travels in various parts of Europe, partly by employing naturalists and curators of museums to collect for him in more inaccessible parts, and partly by the purchase of rare and valuable specimens. Mr. Dobree has very generously presented the entire collection, as well as a cabinet with fifty-two compartments, to the Hull Museum. Each drawer contains about one hundred moths, the entire collection thus consisting of over five thousand specimens. In addition to examples arranged in the ordinary manner, the collection contains many in their natural positions at rest, and also a considerable number of preserved larvæ.

SCOTTISH NATIONAL GALLERY ADDITIONS.—Some additions have just been made to the Scottish National Gallery, Edinburgh. The most important is the full length portrait of Major William Clunas, painted by Sir Henry Raeburn. Another is a sea-scape by John Wilson, R.S.A., painted in 1852. It has been presented to the gallery by Mr. G. R. Macdougall, of New York, who some eighteen months ago called at the National Gallery one afternoon as the doors were about to be closed. By the courtesy of those in charge he was shown round the gallery, notwithstanding the lateness of the hour, and, as an indication of his interest in the gallery and recognition of the courtesy then extended, he has sent across this picture. The other paintings are the diploma works of Messrs. George Henry, R. B. Nisbet, and Tom Scott. All have sent characteristic works. Mr. Henry's is a half-length seated figure of a girl in sweet and skilfully handled greys, brightened with warm touches of red; Mr. Nisbet's is the landscape, with hail and cloud, which was seen in the last exhibition of the Royal Scottish Academy; and Mr. Scott's is a wintry landscape, "Chill November's Surly Blast," in which the artist's careful and conscientious work is strikingly revealed. The other additions consist of two pieces of sculpture, one a girl's bust by Brodie, presented to the gallery by the daughter of the late Mr. J. M. Barclay, R.S.A.; and the other the statuette of Lavoisier, the celebrated French chemist, by the late Jules Dalou, presented by Sir George Reid, R.S.A.

THE BRITISH ASSOCIATION.—The suggestion that the British Association should hold its annual meeting for 1905 in South Africa emanated, it is understood, from the new South African Association of Science, of which Sir D. Gill, Astronomer-Royal for the Cape, is president. Before the last meeting of the British Association took place at Belfast last year, invi-

tations were sent from the municipalities of Capetown, Kimberley, Buluwayo, and other centres in South Africa, and it is understood that these have been accepted, and that the session of 1905 will be held in South Africa. Scientific papers will be read at various places in the South African Colonies, and visits will be paid to a number of places of interest. A sum of £7,000 has been collected in South Africa for the entertainment of the association. While in Rhodesia, the members will be the guests of the Chartered Company, who will place their railways at their disposal, and, among other things, take them by special train to the Zambesi, where they will stay at the hotel which is to be erected near Victoria Falls. Probably the guests will leave England in a special steamer.

THE CANTERBURY EXCAVATIONS.—Lord Northbourne, a trustee of the excavations recently made on the site of St. Augustine's Abbey, Canterbury, says:—"A further portion of the crypt extending westward from the three apsidal chapels has been uncovered. The south wall is in a state of remarkable preservation above the spring of the arches, and has the remains of some fourteenth century windows. On the inner side of the ambulatory are the foundations and rubble, and to the height of 10 ft. or 11 ft., of five massive pillars, additional to and in continuance of those discovered last year. Near one of these pillars was found the leaden coffin and coffin plate of Abbot Ulric I. (985-1006 A.D.), and further westward the body of another abbot, wrapped in silk vestments, much decayed, and pieces of copper-gilt clasps. Two staircases lead from the choir to the crypt on the north and south side of the eastern piers of the great central tower. The plan of the chapter-house has been revealed, and on the east and north sides are the remains of the stalls of the abbot, prior, sub-prior, and other monks. A considerable part of the flooring, with coloured and patterned tiles, is still existing, and there have been unearthed enormous quantities of worked ashlar, carved marble fragments, gilded pinnacles, and figure heads."

ABERDEEN UNIVERSITY ANATOMICAL AND ANTHROPOLOGICAL SOCIETY.—Professor Reid, who presided at a meeting of this society recently, opened the proceedings by a description of a Chinese skeleton and a Boxer's skull. The skeleton had been presented to the Anatomical Museum by Dr. Middleton, Singapore, and the skull by Captain M. B. Pinchard, an officer of the Indian Medical Service. The Professor also showed some relics from China. Dr. Low gave a description of the contents of a series of stone cists found in Aberdeenshire, and now preserved in the Anatomical Museum, Marischal College. He showed that the measurements of the bones from these cists agreed very closely with those of the bones of ancient pagan

Lapps found in East Finmark, Norway, and suggested that ancestors of those Lapps had crossed the North Sea and settled in the north-east of Scotland in the Neolithic age. The description was illustrated by numerous lantern slides.

CHINESE PORCELAIN AT THE BIRMINGHAM ART GALLERY. —Art lovers and persons interested in ceramics are indebted to Mr. George T. Veitch, formerly of Hong Kong, for the opportunity of inspecting at the Birmingham Municipal Art Gallery his collection of Chinese porcelain. Mr. Veitch has for many years devoted attention to the acquisition of old Oriental porcelain, and has enjoyed opportunities seldom accorded to Englishmen in China of obtaining from the leading collectors examples of exceptional interest and value, such as many which belonged to the famous collection of Hu-sin-Yang, which is quoted by the leading authorities upon the subject. Mr. Veitch has not gathered a bizarre assortment of fanciful pieces, such as would attract many collectors, but examples of well-defined types, from the time of the Ming dynasty (1260-1367) down to recent years. So fine a collection has certainly never been seen in the Midlands, while the Franks collection at the British Museum and the Salting collection at South Kensington, though wider in their range and variety, do not contain better specimens of some types than are here seen.

DUBLIN MUSEUM. The latest addition to the museum is an exhibit of chemical apparatus. This marks a new departure in the museum collections. The whole of the apparatus and chemicals needed for teaching chemistry in a secondary school, according to the requirements of the Department of Agriculture and Technical Instruction, are shown in a case in the Industrial Annexe, arranged by Philip Harris and Company, of Dublin. There are at present three loan collections of special interest in the museum. One of wood-carving has been on view for some weeks. The other two are now being arranged. A collection of coloured drawings of fine stained-glass windows of various styles and periods are hung in Passage Room No. 1, where the wood-carvings are. There will also be shown some fine objects which have been shown in the Cork Exhibition, and which the South Kensington authorities are now lending to Dublin. They comprise enamels of many styles and periods, modern pottery, Irish silver, including the Cork guild mace; book-bindings, medal repousse work, mosaics, leather-work, and a very interesting series of drawings of room decorations of Dublin houses.

IMPERIAL INSTITUTE, LONDON.—Professor Wyndham Dunstan F.R.S., has been appointed director of the Imperial Institute, which undergoes transfer to the Board of Trade on the advent of the New Year. Hitherto the Professor has

been head of the scientifie and technical department, and he will continue in charge of the scientific investigation of economic products, and will supervise any other branches of work to be carried on in the building at South Kensington, including the collections of products of the Empire. In fulfilling the new duties imposed upon them, the board at Whitehall will be assisted by an advisory committee representing various official departments and the Indian and Colonial Governments. The commercial intelligence offices of the Imperial Institute will be conducted by the like branch of the Board of Trade, which, subject to the Comptroller-General, Sir Alfred Bateman, K.C.M.G., is under the direction of Mr. Thomas Worthington.

PAINTINGS DAMAGED.—Holbein's painting of King Henry VIII. and his family, and Kneller's famous representation of William III. landing at Margate in 1697, in the public galleries at Hampton Court, have both been damaged, the first by having the face mutilated by a stick or some similar instrument, and the second by being punctured in the foreground.

ART IN DUBLIN.—Since the winter of 1848, when a very successful exhibition of miscellaneous works of Old Masters was held in Dublin, no temporary collection of the same high character has been seen in the Irish capital. But now on the walls of the Royal Hibernian Academy is arranged one of the finest collections of paintings that have ever been seen in Dublin. Many of the pictures have never been exhibited before, and there is hardly a portrait on the walls that does not possess historical as well as artistic interest. The Romneys, numbering eleven, are superb; Reynolds and Gainsborough are splendidly represented; while Hoppner Lawrence, Allan Ramsay, Opie, Gilbert Stuart, Slaughter, Hugh Hamilton (twelve portraits), Chardin, and Greuze combine to make a brave display.

ANOTHER LONDON MUSEUM.—Mr. Henry Syer Cuming, Vice-President of the British Archæological Association, of 63, Kennington Park road, who died on October 7th, bequeathed his museum of natural history, archæology, and ethnology, coins and medals and curios, the library of printed books and MSS., folios of prints and drawings, paintings, drawings, and engravings, and other articles, including a folding mahogany card table made by Chippendale, formerly the property of Frederick, Prince of Wales, father of King George the Third, to the parish of St. Mary, Newington, to be placed in a suitable gallery or apartment in connection with the Newington Public Library in the Walworth road,

and to be called the "Cuming Museum." He also bequeathed to the parish £8,000, in trust, to apply the income thereof in payment of the salary of a competent curator.

A GREEK STATUE. WHERE IS IT?—Art circles are just now agitated over a report which has been current amongst connoisseurs in Paris and London to the effect that a superb work by Praxiteles has been smuggled to this country from Italy, and is at this moment in the collection of a noble amateur. The work in question, the statue of a woman, was found in a lumber room of a private palace at Albano. It was clearly a beautiful specimen of the sculptor's art, but it was not thought to be of any particular value. Recently, however, the Government at Rome hearing of the discovery, sent a commission composed of Italian and German archæologists and sculptors to the palace in question, and these experts unanimously pronounced the statue to be the work of the great Greek sculptor Praxiteles, who flourished as far back as B.C. 360. In ordinary course this report would have been followed by an attempt to buy the statue for the National collection, but within a few days of the visit of the Commission to the palace the statue disappeared, and there is little doubt that the princely owner, in defiance of the law, sold the precious work of art to some agent acting on behalf of a foreign collector.

DUDHOPE MUSEUM, DUNDEE.—During the past year all departments of Dudhope Museum—engineering, technical, and antiquarian—have received a considerable number of additions, many of them of a very valuable character. In the mechanical and engineering section the already large collection of the beautifully executed models of engines and machinery from the celebrated maker, Mr. G. Cussons, of Manchester, has been increased by the acquisition of some elaborate and highly educational examples. This section has been also increased by many other models and drawings, which are conspicuously displayed and labelled on the first floor of the museum. Then a most valuable and deeply interesting addition to the purely technical side of this section has been made by the gift from Mr. W. C. Martin—a Dundee man who has developed a large electrical business in Glasgow—of a large case containing a series of examples shewing the development of the Edison-Swan electric lamp, from its first rude beginnings in glass and light film, on through all the elaborate stages up to the beautifully finished lamp with its fragile "wick." This most interesting case is as beautiful to look at as it is educative in character. In the region of the higher technique, where it develops into the fine art handicrafts, the museum is at present exceptionally strong, the

result of the very rare and high-class character of the present loan collection from South Kensington. In the four large glass cases, with, in addition, upwards of fifty specimens displayed on the walls, almost every kind of art craft is effectively represented. One case is filled with choice examples of inlaid furniture; the second case is filled with examples of repousse work—electro copies of the finest chased examples of gold and silversmiths' work; case three contains a large number of specimens of the most beautiful art iron-work—locks, keys, hinges, knockers, and artistic designs in this metal of all ages and countries. Many examples in the case were the work of apprentice smiths submitted to gain their guild freedom The fourth case shews many specimens of leather-work as employed in the useful arts, with rich but always artistic designs. It also contains carvings in wood, an art of which some larger examples are shewn on the walls. On the walls are placed examples too large for the cases of inlay work, mosaics, and about forty fine specimens of art textiles, carpets, rugs, hangings, &c. The archæological department on the upper floor has also received many rich additions during the year. In one of the cases reserved to illustrate anthropology, and the habits, dresses, &c.. of the lower races, have been placed three striking donations from Mr. R. Reid (nephew of a leading member of the committee, Mr. T. S. Robertson), who is resident in the Philippines. Mr. Reid has presented three panels of a remarkable character—the work of natives of the Far East. The larger panel has a figure of a demon—the evil one himself, as he is conceived in the distant Orient—standing in a mask, and with outstretched hands holding some poor human victim. The smaller panels are replicas of each other, each having many heads of repulsive men or demons carved in high relief, with leering, protruding eyes, and the effect intensified by half the body being turned upside down. The grotesque horror of all three panels is greatly increased by the loud garish colours in which all the carving is picked out—colour which would be startlingly outrageous even under a Malay sun. To the antiquarian department proper, Mr. William Mackison, burgh surveyor, on behalf of the town council, has again made some very valuable gifts, which, being Scottish, are of a less startling nature. From one of the houses recently removed in Blackscroft he rescued a fine piece of old Scottish wood-work—a window made in the days before sashes were "hung," when ventilation was secured by small opening doors under the panes. Also a sundial found in January last on the wall-head of a building at the junction of Constitution Street and Rosebank Street, demolished to allow the tramways to be

made. This sundial is much older than the house, and may be safely assigned to the sixteenth century. Mr. Mackison also presented a framed sheet of drawings and a photograph of the old draw-well and ambry (old English for almonry), found when alterations were recently made on the wall of the old building at the corner of High Street and Overgate, belonging to Mr. W. Patterson. Mr. Mackison sends four other interesting donations—part of a stone mullion found in wall of Messrs. Keiller's works, New Inn Entry, which probably formed part of an older building on same site; a hewn stone found in a trench under Mr. Patterson's house as above; a dressed stone of elliptical shape found 13 feet under surface of ground in Bellfield Street; and a peculiar circular-curved stone found in Lynwood Place, nine feet under the surface. These two last gifts were given to Mr. Mackison by the finder, Mr. W. Angus.

DUNDEE LOCAL COLLECTION.—When Mr. Edward Cox, of Cardean, publicly opened the great collection illustrative of the history of Dundee, which he had acquired from Mr. Lamb, and generously presented to the citizens, with characteristic modesty he suggested that the gift would be at least valuable in causing to gravitate towards it many other valuable Dundee objects now practically lost in the obscurity of private houses. This proved a true prophecy, for few weeks have passed throughout the year which have not brought additions more or less important, and invariably interesting, either as gifts or as loans, which will probably become permanent ones. Some of the earliest of these had also the additional merit of singular appropriateness, for so must be described the fine portrait in oil by the accomplished artist, James Archer, R.S.A., and the bust in marble by George Webster, of Mr. Frank Henderson. He was one of the most prominent citizens of his time—a leading member of the town council, convener of the committee which turned mediæval, narrow-streeted, insanitary Dundee into the fine modern city which he afterwards represented in Parliament. More to the purpose, however, in this connection is the fact that he was the first convener of the Free Library Committee who gave it its initial impetus, and secured for the Albert Institute, art galleries and museum, as well as libraries. Of two other portraits, one represents Mr. "Justice" Blair (born 1750, died 1836), and the other, which is the work of the late Mr. John A. Stewart, is that of Captain Patrick Scott, who was born in 1766 and died in 1855. There has also been acquired a smaller but most interesting portrait of a Dundee citizen who was probably born still earlier in the eighteenth century—Mr. John Shanks, painted by Mr. David Pirie. It

adds greatly to the interest that by the kindness of his great-grandson, Mr. David Pirie, Newport, a water-colour portrait of the artist, painted by himself, has been placed alongside of the other. Other portraits have been acquired:—A small black and white drawing, by Mr. T. S. Robertson, of James Christie, the distinguished Forfarshire sculptor; an engraving of the Rev. David Cook, who so greatly influenced the religious life of Dundee forty years ago; an engraved portrait of George Wishart, the Reformer, presented by ex-Bailie Norrie; a fine large portrait in oil, by the able local artist, Allan Ramsay, of that well-known citizen, the late Mr. J. P. Smith, presented by his daughters. Many other works of a similar character, and also books, charts, coins, medals, maps, and antiquarian relics generally have been acquired during 1902. The last acquisition to be noted is one of great interest. Mr. Lamb, who formed this historic collection, industriously gathered together all the Communion tokens of Dundee and neighbourhood he could lay his hands on, and these are to be seen in the cases of Gallery III. But neither in his, nor probably in any of the other large collections of tokens in or near the city, is there a complete set of all the church tokens of Angus and Mearns, the synod in which Dundee is situated. A complete representation of all these tokens has now been placed in the gallery by Mr. W. T. Ramsay, of Dundee. This young and enthusiastic citizen, by the exercise of great patience and much artistic skill, has succeeded in making accurate and spirited drawings of all the tokens issued since the Reformation by the various parish churches in Angus and Mearns. These are drawn on sheets, one of which is devoted to each presbytery in the synod. Placed in a case beside Mr. Lamb's collection of tokens, and other ecclesiastical relics, they form a quaint and deeply interesting historical study. This record of the additions of a single year effectively demonstrates the possibilities which lie in this historical object-lesson of Old Dundee, amply justifies Mr. Cox's wise generosity, and premises well for the future, and for the present already provides a profitable and fascinating study for the intelligent student of civic history, and for the thousands of holiday visitors who at this season crowd the galleries of the Institute.

THE CAMERA AND ANTIQUITIES.—The project of the National Photographic Record Association has been cordially taken up in many of the English counties. The aim of the society is to obtain and preserve photographs of places and objects of interest; and, as the carrying out of this aim is both pleasant and inexpensive, local practitioners with the camera have readily entered into the scheme. The photographs are being deposited in local museums and libraries, where they

will form a valuable and picturesque record for later generations. Archæologists especially have every inducement to contribute to the success of an undertaking that lies quite within the scope of their own tastes and work. Relics of the past are disappearing with too great rapidity, and, though a reaction against vandalism has set in of recent years, their own age and the industrial changes of the country, not to speak of ruthless neglect and indifference, will quickly enough denude the land of memorials of much interest, whose likeness, at least, would be well worth keeping.

AS OTHERS SEE US.—Dr. A. B. Meyer, the director of the Dresden Museum, was despatched by his Government last year on a mission of inspection of the principal museums in this country and the United States. A copy of his report on the result of his mission contains a somewhat severe criticism on the poorness of the ethnological collections in the British Museum, which is worthy of more than passing notice. "Considering the world dominion of Great Britain," writes Dr. Meyer, "it ought to have been the natural task of the British Museum to take the lead in ethnography; whereas the extent of the Bloomsbury collection is scarcely greater than that of several Continental collections, and is left far behind by the magnificent collection at Berlin." There is much truth in Dr. Meyer's criticism. The subject has long engaged the attention of leading students of ethnology in this country, but the difficulty of increasing the collection at the British Museum is want of room. An Imperial Museum of Ethnology is greatly needed for a proper study of the customs, languages, beliefs, and habits of native races. At one time it was thought to turn the Imperial Institute to some such purpose, and an effort in that direction was made, but the opportunity as regards that building is now passed.

CURATORIAL ADAPTATION.—From time to time the view of museums likely to be taken by the "man in the street" has formed the subject of discussion at the Association's meetings, though the man himself has not often there expressed his view. Evidently the "man in the club" sometimes turns his attention to museum subjects, judging from the following paragraph which appeared in the *Liverpool Mercury* of Dec. 17, 1902. In explanation, it may be suggested that the city referred to has a name long associated with cutlery, and is situated in the largest county of England. It may also be pointed out that the "sort of dell" mentioned is an open park, with a fairly free horizon, and the observatory in this park is about 250 feet higher than the one on Bidston Hill:—

"A Dale Street club discussion yesterday on the desirability of preserving in some way, preferably in connection with the proposed Liver-

pool University, the Bidston Observatory as a Liverpool institution, led to the telling of an amusing story. By private presentation, a certain city, with which Liverpool has many t es, acquired an astronomical observatory rather su'denly, and there arose a difficulty in educating the municipal council up to the occasion. The observatory, it was held, should be attached to the public museum, which stood in a park, and, to save the cost of a special site, the observatory was actually dumped down there, several statues found to obstruct the streets being likewise consigned to the park, apparently with the view of filling up the vacant space. Having placed their observatory in a sort of dell. the council thought the next economical step would b- to appoint the museum curator to take charge, and they did so, despite the protest of one militant member, who objected, as he said, ' to pay money to a man for persuading people to look at the moon.' The curator, though a specialist in several branches of science, had never before been called upon to work a large telescope, or to use stellar maps throughout the year. So the council decided to let him visit the Cambridge Observatory for a coaching period, and they liberally allowed him a week out and home. He made splendid use of his limited time."

BEQUEST TO THE NATIONAL GALLERY, EDINBURGH.—Mr. Patrick Shaw, advocate, Sheriff of Chancery, Edinburgh, died on the 12th February, 1872, and left a codicil (dated 9th November, 1870) to his trust disposition and settlement in the following terms:—"In regard to the pictures, which consist chiefly of the works of old masters, my trustees may, if they see fit, offer them to the directors of the National Gallery, Edinburgh, but if declined by them, the whole collection to be sold; but in both cases only with consent of my wife, if she be alive." Mrs. Shaw died in Edinburgh on the 20th November, and Edinburgh is now at liberty to take advantage of his bequest.

THE LATE PROFESSOR YOUNG, GLASGOW.—Dr. John Young, one of the few remaining of the older race of Glasgow University Professors, died at his residence, 19, Bute Gardens, Glasgow, on Saturday, December 13th, 1902, in his sixty-seventh year, after a long period of failing health. It was on account of his health that he retired from the Chair of Natural History at the close of last session, after holding the position from 1866, the year of his appointment. Professor Young was educated at the High School and University of Edinburgh, graduating in medicine at the latter. At an early period he manifested a special interest in mental diseases, and was for some time an assistant at Morningside Asylum. His attention, however, became more and more directed to zoology and the allied sciences, and of his knowledge in these subjects he speedily received recognition. From 1860 to 1866 he was on the Geological Survey. Ultimately in the Chair of Natural History and Geology in Glasgow University he found a fitting field for the exercise of his peculiar gifts, and for the pursuit of his natural scientific tastes. A man of great versatility and

width of sympathy, Dr. Young did not confine himself to his University work. He was a pioneer in the movement for the higher education of women. On local archæological remains and antiquarian lore he was an authority. He was the Keeper of the Hunterian Museum, and in resigning his Chair a year ago he asked that he should still be allowed to retain this position in order to discharge all the obligations he had undertaken in that connection. To the various duties and interests which he took up he always brought a large fund of enthusiasm, and amongst his friends and correspondents he numbered some of the foremost scientific men in the world. In Glasgow there was lately set on foot a movement to present him with his portrait, and steps were being taken in that direction at the time of his death.

ABROAD.

DURBAR HONOURS.—Among these we notice Dr. George Watt, C.I.E., officer in charge of the Economic and Art Section of the Indian Museum, Calcutta, to be knight, and Major A. W. Alcock, F.R.S., Superintendent of the Indian Museum, to be C.I.E.

PARIS, MUSEUM D'HISTOIRE NATURELLE.—Mr. J. O. Edmond Perrier has been appointed to the chair of comparative anatomy at this institution, and Mr. Pierre Marcellin Boule to that of palæontology. Mr. Perrier has been elected representative of the museum on the French Council of Public Instruction. The death of Dr. Dehérain, professor of vegetable physiology at this museum, is announced.

LEONARDO DA VINCI.—The Italian Minister of Public Instruction has just signed a decree to the effect that "in view of the fact that the greatness of Leonardo da Vinci cannot be wholly known unless all his manuscripts and works are published, and considering that the autographs possessed by the library of the Royal Castle at Windsor, the British Museum, and the South Kensington Museum not only have a great value for the history of science but also help towards the world in general, knowing in what manner Leonardo used for his art the study of nature, and recognising the necessity of making a new and correct edition also of those works of Leonardo which were published abroad, and considering that the publication by Giovanni Piumati of the 'Codice Atlantico,' the 'Codice on the Flight of Birds,' and of the two parts of the 'Treatise on Anatomy,' are a perfect work of intelligence and love, by which he has justly merited the applause of students," all the works of Leonardo da Vinci shall be pub-

[illegible] of the expense of the State. This important decision on the part of [illegible] has given great pleasure to all admirers of [illegible] and interest in art in general. The result will be that very many of the great works hitherto [illegible] will be made known to the connoisseur and to all the world.

Theft of Gold and Medals at Marseilles.—The Town Council of Marseilles have recently been robbed of some valuable specimens. Altogether nearly seven hundred gold coins and medals were removed by burglars. The collection was kept in a room adjoining the Museum Laboratory, and [illegible] on arriving in the morning, discovered that all the cases had been broken open and every one of the medals gone. The burglars made their way over the roof, and got in through the skylight. Most of the medals were very valuable, and the collection is said to be worth £4,000. One of the coins was a gold Louis crown piece, valued at £165. Only two other specimens of this coin are known.

Imperial.—A year or two ago Herr Meyer, a brewer of Johannesburg, left to the town of Stettin £15,000 to build a museum. The Emperor's consent is required for the acceptance of such legacies, and in this case he refused the corporation's petition on the ground that the will violated a moral duty towards indigent relations, whom the testator had ignored. The Emperor therefore insisted on Stettin indemnifying Herr Meyer's needy kin before building the museum.

A Museum of Colour.—Every craft and manufacture gains enormously by a knowledge of colours and their uses, and the Government of New South Wales has wisely resolved to add to its permanent museum at Sydney a collection of colours and chemicals used in colour-making, by which the dyes and pigments for every purpose may be known and selected. The collection has been made in London by Mr. J. Barton-Faithfull, and was shipped in December. The mere statement that the collection, contributed by the leading manufacturers in England and elsewhere, includes two thousand specimens of colour, is eloquent of the resources of modern science. Many of these colours, when used as dies, yield a dozen or twenty beautiful shades, and the museum shows each of these shades in the dyeing, of silk, wool, cotton, leather, and other fabrics; gives the proportion of dye for each shade, the cost, the name of the manufacturer, and the Australian agent. Of course, all this will be of immense service in New South Wales, where wool, fat for soapmaking, and other "raw materials" only need technical knowledge and skill to enable them to furnish employment to industry on the

spot, instead of being sent thousands of miles away to be worked upon. The greatest and most brilliant series of colours at present on the market is that of the anilines and alizarines made from coal tar, the primary products for which have been presented by the Gas Light and Coke Company. The clear, transparent, water-like aniline produces almost every colour of the rainbow. But there are also pigments produced from metallic substances, from animal matter, and from vegetable extracts. One of the most important questions relating to colours is that of their permanence. Of course, the colours in Mr. Barton-Faithfull's collection vary greatly in this respect. The artist's palette of enduring colours is still almost as limited as ever. Indeed, the tendency is for more and more colours to turn out unreliable. There are Egyptian paintings on earthenware and stone which have lasted thousands of years and kept as bright as ever, but these depend on two or three primary colours only. The work of a few of the old Italian painters has preserved its brilliance through centuries, but of most old pictures it must be sadly confessed that they have greatly faded, and that while the expert writes columns about richness of tint, the common eye sees only a variegated coffee-colour. A hundred years ago a good many English painters were quite reckless about the way in which their effects were produced, and butter instead of oil, liquorice and tobacco-juice for pigments, were among the materials used. What wonder that we now look in vain for the beauty which all admired at the time!

VERDI MUSEUM, MILAN. A sort of Verdi museum has been formed at the hospice for decayed musicians which Verdi's executors recently opened at Milan. The museum, which will be available to the public, was inangurated at the beginning of this month. It contains all sorts of portraits and busts of Verdi and his family, his decorations and diplomas, together with the famous old spinet on which (now eighty years ago) Verdi as a child made his first studies in the loft over the grocer's shop, the piano on which he worked at Milan from 1833 to 1835, and the Erard grand on which he composed "Otello" in the Doria Palace. Verdi's writing desk and the pen he last used are also in the collection.

BABYLONIAN ANTIQUITIES. – Professor Hilprecht, the head of the archæological department of the University of Pennsylvania, states that the Sultan, in recognition of the services rendered by him to the Imperial Museum at Constantinople, has presented him with the richest collection of Babylonian antiquities in the world. Professor Hilprecht has placed it in the University Museum.

Correspondence.

Commercial Names for Natural Objects.

To the Editor of *The Museums Journal.*

Dear Sir,—I am obliged to my friend Dr. Stokes for so kindly corroborating and elucidating my remarks as to the erroneous nature of some of these names. I am only sorry he should seem to imply that my casual reference to matters of common knowledge was intended as a serious and authoritative "dictum." I was of course aware that one could purchase genuine soda-water from a pharmaceutical chemist; but I was alluding to the wayside, or even London club, drink, which, as Dr. Stokes says, may be nothing but an aërated solution of common salt, and I still believe that even the latter ingredient may be absent. As to "effervescent citrate of magnesia," Dr. Stokes admits that the name is incorrect, but his assertions do not appear to me much nearer the truth than was my hazarded belief I have not seen a label stating that the substitute sold is "citro-tartrate of soda;" indeed if it were, it would not effervesce.

There are many other cases that might be quoted, and that are familiar as having formed the subjects of law-suits: such are the sheets stamped "best twilled linen," but admitted to be made of cotton; the "alpaca" fabric which, as we were told at Bradford, is made of alpaca wool in only the rarest cases; "pebble" lenses, not of quartz as the name implies, but of mere glass; "talc" lamp-shades made of mica; "petit granit" or "Belgian granite," which is a crinoid limestone, and has been used for tombstone monuments when true granite was intended.

These are not adduced as instances of adulteration, merely as trade-names, which are misleading only to those who have "less acquaintance with commercial matters" than my critical instructor "quite obviously has." Their use, in many cases, dates back to a time when the article coincided with the natural meaning of the name. In course of ages the nature of the article changed, while the name was retained unaltered for pure convenience. The object of my paragraph was neither to slander tobacconists and pharmacists, "all honourable men," nor to give a lecture on chemistry and etymology, but to remind curators of a fairly well-known difficulty.

F. A. BATHER.

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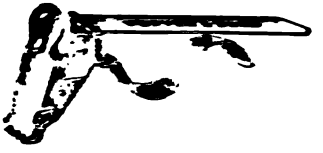

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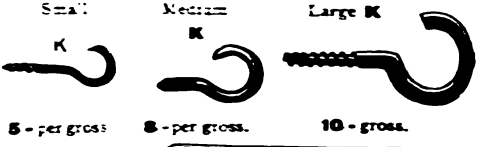

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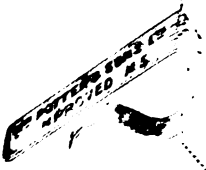

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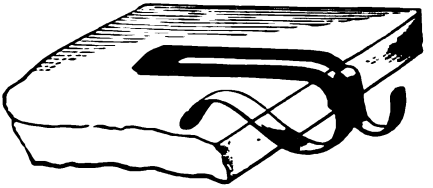

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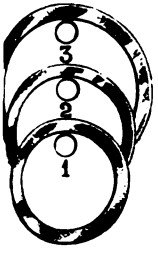

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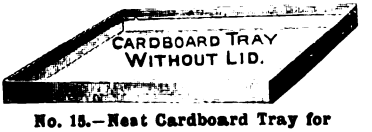

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A Design for the Tops of Table-cases.

By A. J. JUKES-BROWNE, B.A., F.G.S.

[Read at the Bradford Conference, 1902.]

TWO new table-cases having recently been constructed for the museum of the Torquay Natural History Society from a design of my own, and the result having proved satisfactory, it has been suggested to me that a brief description of the arrangement for the top might be published in the *Museums Journal.*

Several ways of opening the glass-tops of table-cases have been devised, but I have never seen one that was quite satisfactory. In planning a method of opening the case three considerations should be borne in mind, (1) the glass-top should not be too far from the specimens, (2) dust should be kept out as much as possible, (3) access for the purpose of withdrawing or re-arranging the specimens should be easy.

The plan of having the glass-top to lift up is open to two objections. First, unless fitted with felt it admits much dust; secondly, a rod and racket arrangement has to be inserted for its support when opened, and this sometimes leads to accidents.

My plan therefore started with the principle of having a fixed glass-top, and for several reasons a flat one was thought desirable. Access to the interior is arranged by having the vertical glass-front to let down on hinges, but if the height of this front is sufficient to allow the arm to pass in easily, the glass-top is then placed too far above the specimens; space is thus lost and the specimens cannot be

well seen. The alternative is to have a sliding shelf or board which can be pulled out when access is required. The glass-top can then be fixed at 4½ or 5 inches above the surface of this shelf.

But a sliding shelf will tip up when it is pulled more than half way out, and to prevent this I had the edges of the board cut so as to leave a projecting central ridge on each side, each ridge sliding in a groove cut into the flanking woodwork. To keep tablets within the area of the sliding board, a low bevelled strip of wood is fixed round three sides of it.

The advantages of this plan are fourfold. (1) It is almost dust-proof, for the opening is the smallest possible, and is in the vertical front beneath the projecting edge of the case; (2) no space is lost in any part of the case, except for the narrow strips between the sliding shelves ; (3) specimens are brought as near as possible to the eye of the visitor ; (4) access is not only quite easy when required, but the whole shelf or tray can be taken out if desired.

Our cases have been made in basswood, ebonised, and picked out with gold lines, and they give general satisfaction.

It is, of course, quite possible that someone has already devised this method of dealing with the top of a table-case; but as it does not seem to be generally known, its publication may be useful. The arrangement is not more costly than other methods, and so far as our practical experience of it has extended, it works very satisfactorily.

The Use of Museums in Teaching.

BY WILLIAM E. HOYLE, M.A., M.SC.,
Director of the Manchester Museum, Owens College.

(Paper read at the North of England Educational Conference At Manchester, December, 1902).

THE remarks which I make bold to offer for your consideration this morning are suggested by the decision arrived at by the Education authorities some few years ago, that time spent by school classes in museums, under proper supervision, should be allowed to count as time spent in school.

This at once makes the Manchester Museum and all kindred institutions an integral part of the national apparatus for elementary instruction. These are now no longer merely store-houses of material for investigation by specialists, nor means for teaching budding M.B.'s and B.Sc.'s in university classes, but they come into intimate relation with the children learning the three Royal R's in the elementary schools. I rejoice to think also that they occupy a neutral territory, where private school, Board school, and Voluntary school may meet upon a common ground.

Under these circumstances it behoves us, who have the direction of the museums, and those who teach the children, to take counsel together, and see what new responsibilities are laid upon us by this most broad-minded concession of the Education Department.

I will therefore, as briefly as may be, put before you my view of the situation, and then I shall hope to be favoured with notes and comments from those who have had much more experience in teaching than myself, for I come before you to-day more with the hope of finding out the requirements of schools than of enforcing views of my own. This boon granted by the Department has, like other benefits, its possibilities of abuse, and it rests with the teachers to make it a means of progress and enlightenment or to reduce it to a folly and a fraud.

If the teachers bring their children to the museum, having taught them well at school, if they know what they want to show them, where to find it, and what the different specimens illustrate, they will make the lesson interesting and a means of greatly extending as well as rendering more vivid the information already given in school. If, however, the teacher is a stranger to the collections, if he has no definite object in coming except to get off a lesson and pass a half hour easily, if he has no acquaintance with the objects beyond what is conveyed by their labels, then the children will soon fall to playing hide and seek round the cases, and it would be better for them, as well as for the property of the museum, if they were in the playground.

There is no need to try to define a museum; that attempt has been made by many with varying success. I remember in my extreme youth being asked by my schoolmaster what was alluded to in the phrase, "the great national mausoleum," to which I replied in all innocence, "The British Museum," and was assured that my answer was, perhaps, more true than I supposed. Such a term might, perhaps, apply to certain miscellaneous collections of relics, and of what Mr. Ruskin calls "charnel house stuff," which I have seen, but I hope it is not a fair description of our museum here.

Our aim (though I am well aware how far we fall short of its attainment), expressed in a single sentence, is to provide a series of natural objects systematically arranged and intelligibly labelled. We take, if I may use the metaphor, the threads from that glorious tapestry which we call Nature, and rearrange them so as to show the way in which the pattern is built up. The order which the scientific mind by long study traces out in Nature we strive to show iu a more simple and diagrammatic fashion.

Given we have a museum disposed on these lines, how can it best be made use of for the instruction of children? Teaching in the museum to be of the maximum use must be correlated with the teaching in school. From this it follows, in my opinion, that the proper people to give instruction to classes of children in the museum are the teachers. I know that in

this I am at variance with some for whose views I entertain great respect, but I hold to my opinion nevertheless. Imagine a dozen children brought to me in the museum: they are strangers to me and I to them. I know nothing of what they have learned, nor of how they have been trained, what are their powers of observation, and so forth. In such a case I should probably assume that they knew nothing, which experience has led me to regard as a pretty safe working hypothesis, and by taking them round the collection of birds I might perchance succeed in helping them to pass an interesting and amusing half-hour. But does anyone think that they would reap anything like the same benefit as might be gained in the same time from a teacher who knew them intimately, who had given them a carefully graduated series of lessons, and who knew the resources of the museum and where to turn for the illustrations required to supplement the instruction given in school?

Having insisted so strongly on the necessary relation between museum teaching and school teaching, perhaps you will allow me to say a word or two about this latter.

Why is science taught in schools at all? In order that the children when they grow up may more easily become chemists or engineers? I trust that technical education has not yet gone so far as to invade the infant school. Children are taught science because two great realities in the world around us with which, whether we like it or not, we are concerned all our lives, are matter and force, and because that particular variety of common sense which we call the scientific method is the only fruitful mode of studying them. In all branches of science the method is the same; and in one sense it does not matter which we study, provided we set about it in the right way: still there are practical conveniences to be considered, and I feel no doubt that for systematic teaching mechanics and physics form the best introduction; the study of biology, which is of paramount importance to all of us, involves for its successful prosecution some acquaintance with physics and chemistry, and should, therefore, be undertaken afterwards.

Ought we, therefore, to defer all biological teaching till this comparatively late period? I think not. We can begin to impart the facts of biology to a child as soon as it is old enough to take any interest in the objects round about it.

I trust I need hardly say that no teaching in science is worthy of the name which is not practical, which does not allow the children an opportunity of verifying for themselves the facts imparted; it is the cardinal distinction of science as opposed to such subjects as history and geography, as educational instruments, that facts are learned by experience and not upon authority.

Perhaps you will say that to teach mechanics and physics in this way is beyond the resources of ordinary schools, to which I reply that such is not the case at all. I have given a course of lessons in experimental mechanics to a posse of boys from the board schools with a set of apparatus, the cost of which certainly did not exceed five shillings, and which was capable of being carried in a small hand-bag. Such instruction gives a tangible acquaintance with force and motion, shews how they are capable of measurement, and how the laws according to which they act can be ascertained by experiment; and thus furnishes an introduction to scientific method which is of inestimable value.

The laws regulating living organisms are no less valid, but they are more complex, and many of them, if not all, are applications of the physical laws to which I have just alluded; and therefore it is desirable that these latter sciences should precede biology in point of time. Seeing, however, that we are all of us animals, biology, which comprehends the forms and functions of all living creatures, is of paramount importance to us, especially when we consider that sociology, in all its widespread ramifications, is only a particular department of biology.

Will you allow me to allude in passing to one great merit of biology as a subject of school teaching? It is that by its means you can give to children in a perfectly simple and natural manner a knowledge of the principles of reproduction, both in animals and plants, which will solve for them many

mysteries when they come to riper years, and prevent them from acquiring the information by less desirable means. I do not wish to be misunderstood: it is not necessary to enter into every detail, but just so much of Nature's methods may be imparted as will furnish the solution of puzzles which are sure to arise hereafter.

I have already expressed the view that many of the facts of science may be taught to quite young children, and that in a scientific manner, which will be a capital introduction to systematic courses of study which may be undertaken later on. The thesis, which will no doubt be generally admitted, that all instruction must be practical, involves the conclusion that every school must possess a larger or smaller collection of natural objects which we may dignify with the name of the "school museum." This need not involve any very great outlay, especially at the outset; a beginning may be made with a cupboard and a sum of money from, say, one shilling upwards. Glass cases and so forth are luxuries which may or may not be attained to hereafter. Much good may be done by inducing the children themselves to collect.

Passing now from the material apparatus to the mental qualifications of the teacher, will you pardon the platitude that the first essential is adequate knowledge? I have heard so much lately about training in the methods and systems of teaching that it has appeared to me that there is just a little danger of forgetting that wide and accurate knowledge is of prime importance. Nothing can make a successful teacher of science except a scientific training, and this leads me to venture a word or two on the subject of what are known as "object lessons." I understand that all the students in our training colleges are required to prepare specimen lessons on certain natural objects, and that whether they be studying science or not. Now, an object lesson, I make bold to say, is a form of science teaching, and how any student who has not scientific knowledge can be expected to prepare a satisfactory one is more than I can imagine. However, there is a way of meeting most of the requirements of examining Boards, and that is "cram." Such lessons can be purchased ready-made, neatly bound in boards, and with lists of objects required

all ready for delivery. Some of these books are undoubtedly good, some are bad, but perhaps I had better not mention instances, especially of the latter. This is a relic of the old idea that beginners are the proper people to give elementary instruction. To teach the elements really well requires a master in the subject, and no one can give object lessons safely and satisfactorily without a pretty comprehensive acquaintance with the branches of science involved.

Do not misunderstand me; in the object lesson itself, properly carried out, I thoroughly believe, and it is here I think that a museum can be of very special service, for in it are no lack of objects, and so arranged that cognate ones are near at hand for reference and comparison.

Assuming, then, that the teacher has the requisite knowledge, and is giving in school either a disconnected series of object lessons to very young children or a systematic course to those of larger growth, what is the next step in preparation for a museum lesson? Clearly to visit the museum privately, to see what it contains illustrative of the subjects being taught, where they are situated, how they are arranged, and how they may be used to supplement the materials existing in the school museum.

For example, if a lesson has been given in school on a snail and a cockle, the teacher in the shell gallery may show the children the immense number of modifications which these types undergo, and give them an idea of the wealth and beauty of nature impossible without such resources.

May I tell you, in conclusion, what we have tried to do to help schools to an intelligent and helpful use of our museum? In the first place I must ask you to bear in mind that we have to cater for (at least) three different classes of persons in addition to the elementary and secondary school teachers, so that in many respects the museum is very different from what it would be if we had only these last to consider. Notably is this the case in respect of the number of different forms (especially of fossils) exhibited.

Beginning with the minerals, which have been aptly defined as the raw material of the earth's crust, we pass on ot

rock specimens, and then are arranged a series of cases showing the effect of natural agencies in modifying the form of the earth. These ought to be of the greatest service in the teaching of physiography.

Next follows an extensive stratigraphical series, where may be studied the history of living beings on the earth in chronological order. Here, as throughout the museum, the various divisions and sub-divisions are so labelled that it is believed that anyone who comes to the collection text-book in hand can find their way about it.

In the zoological department at either end of every floor is a label giving a list of the divisions to be found there, with their Latin names and vernacular equivalents and the number of the case in which they are exhibited. We have commenced the system of placing explanatory labels to the principal sub-divisions, and in these an attempt has been made to meet the requirements both of the University student and the elementary teacher, though here, I doubt not, we sometimes experience the fate of the man who attempts to ride two horses at once.

In the botanical department we have exhibited two separate series, one showing the vegetable kingdom systematically arranged; the other disposed according to anatomical and physiological categories—roots, stems, seeds, insectivorous plants, &c. Our archæological and ethnographical collections, except as regards Egypt, are only in their infancy, but they afford, we believe, valuable material for teaching purposes.

We have also printed and published a number of handbooks, catalogues, classification tables, and the like, which we are proud to believe are found of use in other institutions besides our own. So much for the museum itself, which I hope to have the pleasure of showing you at the close of this debate.

You will gather from what I have said earlier in the paper that the museum staff has not made any extensive or systematic attempt to teach children in the museum. It appeared to us that a much greater service might be rendered by attempting to teach the children indirectly by teaching the teachers. As soon, therefore, as the regulations regarding museum visits

came into force, a class for teachers was arranged with a view of exhibiting to them the resources of the museum, and indicating some of the ways in which they might be utilised. A class of about thirty was formed, and the results appeared to be satisfactory except in one particular—a matter so serious however, that it led to the course being discontinued. That was that scarcely any of the pupil teachers or teachers in the public elementary schools attended. The reason, I was told, was that they had so much to do that it was impossible for them to find time.

As regards the visits of school classes, these have not been much more encouraging, and here the difficulty seems to be of a similar nature. The regulations prescribe that for a museum visit to be reckoned as school attendance the number of scholars must not exceed fifteen. Now the numbers in the classes of such schools are usually, I understand, at least twice this, and, therefore, if a teacher goes off with fifteen the question at once arises—what is to become of the remainder? It does not fall within my duties, or my power, to answer this question. I can only say that we are prepared to take our part in the education of the country, and shall be happy to learn from our friends, the teachers, how we can best help on their work and lighten their labours.

Following the reading of the paper, the CHAIRMAN remarked that they were greatly indebted to Mr. Hoyle for his very interesting and suggestive paper. The only thing that struck him (the Chairman) about it was that it was altogether too short, and might have been extended with great advantage.

The Rev. Dr. BRUCE (Huddersfield), in opening the discussion, said that Mr. Hoyle had been a personal friend of his for many years, and he was present that morning as much out of a feeling of personal attachment to Mr. Hoyle as of interest in the subject. It was very kind of Mr. Hoyle to read the paper, and to give those attending that Conference an opportunity of seeing what he (Dr. Bruce) believed to be about the very best provincial museum in the kingdom. As to the possibility of grafting museum teaching upon elementary teaching, he thought Mr. Hoyle had judged the situation remarkably well. In that, as in other things, the difficulty had been that of time—the time and the opportunity for the

teachers to learn and the time for the children, with the many subjects that were open for teaching in our elementary schools. There was also another difficulty—that hitherto the training of the teachers had not been adequate to the country and to the work that they had to do. It was surprising what the teachers had done. Some of them were splendid, and all of them were doing their very best, but the short time and the limited means at their disposal for qualifying themselves for the situations they had to occupy were too limited, and he would be very glad if, as a result of the Education Act - which he might say he did not very heartily approve of—a wider, freer, and stronger curriculum were allowed to teachers and enjoined upon schools. Their difficulty, especially during the last few years, with the Board of Education had been the limitation of their work and of their subjects. If they would only have given them the liberty that was given in Scotland, both as to age and curriculum, there would not have been any occasion for complaint as to the deficiency of the elementary schools of this country. They had done their best as far as the Board of Education had permitted them, and he was rather sorry that they had put so much absolute and supreme power in the hands of a very small body at Whitehall. It ought to be understood that in cities like Manchester, Liverpool, and London there were a good many men actually teaching who were quite as competent to judge what should be taught as a few selected secretaries who might be gathered under the wing of the Board of Education. Great progress had been made in science teaching of a simple character; but in teaching as well as in inspecting there was a very great difference. They had had Inspectors who occasionally did little in the way of giving ideas and suggestions to teachers for the improvement of their work, but who seemed to pursue their inspection on the same principles that some teachers pursued their teaching—that was on the system of "cram." But, on the other hand, they had had Inspectors who had been of great use, especially in the illustration of natural objects in the infant classes, and when one of those gentlemen first came to Huddersfield he was fortunate in his result of his report upon the schools, because his ideas were so much higher than that of the teachers. The report was not unfavourable because the object of the Inspector was not to "spot" them and to condemn them, but to help the teachers, and that was the best kind of inspectorship. (Hear, hear.) He was only sorry that in the discussions on the Education Bill too much attention had been given as to the quantity of dogma brought out from the museums of theological schools, and too little attention to those subjects which were well within the range of children and necessary for their education.

Miss HALL (Whitechapel) said that at Whitechapel they had tried to use Article 12 G of the Code in a very simple way. They started a little more than five years ago trying to use the permission. She hardly knew whether she could say they had been successful, because their borough was such a very large one, and with their small museum and very small staff they could only touch the fringe of the question. She quite agreed with Mr. Hoyle that classes should not be taken to museums unless they went with a definite purpose. Children going into museums obtained a great deal of good, but classes should not be taken unless they had a definite purpose, and, what was more important, preparation beforehand. To get over the difficulty of numbers they suggested that forty-five children should be taken to the museum, and that two teachers should go with them—if possible, the head teacher and the teacher of the class, and then they were divided into three groups—she herself taking one group. The objects to be studied were taken out of the cases and placed upon tables. That might be a difficulty in some museums, unless they had a separate collection for the purpose. Theirs, however, was a working museum—the objects must do their work, and, if they were spoiled, they must find others to replace them. One of the greatest difficulties she had experienced in getting teachers to take their classes to the museum was a conscientious feeling that they ought instead to stick to their posts at the school. The Jewish Free School in the East End took the greatest pains in using the museum for their children. The Jewish teachers often went two or three times beforehand to prepare their lessons, but she could not say the same with regard to the teachers in the Board and other Voluntary schools. As to the benefit of museum teaching to children, she thought it was quite obvious.

Professor WEISS remarked that they had had a good number of teachers coming to that college museum in a way which was much to be admired—many who had to devote their whole days to teaching had come of an evening and on Saturday afternoons. Museums were often looked upon as dry institutions where one could pass away a wet afternoon, and the fault for that had been both on the side of the museum and on that of the visitor. Museums had not always been arranged for the edification of visitors, and visitors had not always possessed sufficient knowledge to appreciate the exhibits. They needed children to be brought up so that they would be able to visit and appreciate the museum after they had left the school. He would ask teachers to endeavour to get school museums, however small, and so interest their children in natural history subjects.

The Rev. S. GASKING (Liverpool) said that in his opinion it was very necessary that the instruction in a museum should be accurate, and therefore he rather preferred the curator, or his assistant, giving the lesson to the children, rather than the master or mistress of the school.

Mr. HOYLE, in a brief reply, said he agreed with Dr. Bruce that children liked pure science—they did not wish to be merely amused—but the science must be given to them in such a way that they could comprehend it and so follow it, and if given in that form it was always interesting. In his opinion it was a mistake to try and invent easy names for things which had a proper recognised name of their own. He was very much interested in Miss Hall's account of her work in Whitechapel. He still thought that it was a very good plan for every school to try and get some small collection of natural history objects, and, in addition, the children could be taken to the museum. After the lesson had been given, it was a good plan to let the children wander about the museum for a short time at their own sweet will.

On the proposition of the CHAIRMAN, a hearty vote of thanks was accorded Mr. Hoyle for his paper, and subsequently a large party accompanied Mr. Hoyle over the museum.

Museum Publications.

ANNUAL REPORT OF THE KEEPER OF THE MUSEUM OF COMPARATIVE ZOOLOGY AT HARVARD COLLEGE to the President and Fellows of Harvard College for 1901-1902.

During the year regular courses in zoology, geology geography, and meteorology were given in the museum laboratories. The courses in zoology were attended by 267 students, those in geology by 569 students. A detailed account is given of the equipment and assignment of rooms in the new geological section of the University Museum. The report says: "It is doubtful if any Geological Department connected with an institution of learning is so comfortably and liberally housed as that of Harvard University." New standpipes and hand fire extinguishers of the "Underwriter" pattern have added materially to the efficiency of the fire apparatus. The rooms have been thoroughly overhauled. The department of zoology, including palaeontology, has now thirteen laboratories

and lecture rooms, besides a workshop, photographic room, vivarium, and an aquarium in the basement. The accessions include two large mounted specimens of the great land tortoises of the Galapagos Islands, the collection of "Albatross" foraminifera presented by Dr. Flint, Mr. Scudder's collection of early stages of butterflies, Dr. Thaxter's collection of moths. The library has received an addition during the year of over 5,500 volumes and pamphlets. The museum has published seven numbers of the "Bulletin" and six numbers of the "Memoirs." The keeper and Mr. Agassiz explored the Maldive Islands with very satisfactory results. Other members have or are doing expeditions in search of material and investigation. In the mammalian section 125 specimens with skulls have been added and old material and duplicates weeded out, and all the sections show a substantial increase. The invested funds of the museum amount to 590,737·11 dollars, considerably over a hundred thousand pounds There is a good view and a coloured plan of the museum.

A HANDBOOK OF THE DETROIT MUSEUM OF ART, 1902. "Issued in the hope that the people of Detroit may become better acquainted with this institution and its increasing educational value to the public."

The museum starts from an Art Loan Exhibition held in 1883, and with some £10,000 subscribed in addition, a beginning was made, and a stone fireproof building erected. In 1889 Mr. J. E. Scripps gave eighty pictures, valued at £15,000, including a Rubens purchased at the Secretan sale, Murillo's "Immaculate Conception," and "Martyrdom of St. Andrew," and works by Matsys, Titian, &c. In 1893 the city council gave 5,000 dollars, afterwards increased to 12,000 dollars grant per annum, towards the maintenance, on condition that the admission to the museum be free at all times. In 1894 the museum was enlarged, and it is now sought to add a lecture room. In sculpture there is the Baldwin collection, and copies of various masterpieces, with some works of American artists. There is a good collection of plaster casts. The picture galleries contain a picture presented by Pope Leo XIII., Rubens' "Abigail meeting David with presents," a description being given, with Max Rooses' criticism, a pastoral scene by Cuyp, a battle scene by Courtois

(Borgonone), a Dutch Interior by Peter de Hoogh, "Christ in the House of Martha and Mary," by Steenwyck the younger, a head by Ribera, F. D. Millet's "Reading of the Story of Oenone," and others. In Japanese Art there is the Stearns collection, including specimens of wood and ivory carving, lacquer work, arms and armour, with a very fine collection of pottery. There is a small collection of gems, coins and medals, and a representative collection of Egyptian and Græco-Roman antiquities. A number of objects from China and Korea, Turkey, Persia and Asia, some specimens of arms and armour, footwear, pipes, and a small scientific department complete the list of contents of a singularly attractive and well-guided museum. The handbook is a most admirable one, illustrations are given of the building and of the principal pictures and other objects, and clear and well informed notes elucidate the meaning and history of the varied exhibits. There is evidently a great future before the Detroit Museum of Art.

SMITHSONIAN INSTITUTION. Bulletin of the United States National Museum, No. 51, 1902. A List of the Publications of the United States National Museum (1875—1900), including the annual reports, proceedings, bulletins, special bulletins, and circulars, with index to titles by Randolph I. Geare.

This is one of a series of papers intended to illustrate the collections belonging to or placed under the charge of the Smithsonian Institution, and deposited in the United States National Museum. The publications of the museum, which are of the greatest scientific value, are not sold by the museum, but are sent to libraries and furnished without charge to those engaged in scientific work. This list will be of the utmost service for reference, and must have entailed an enormous amount of labour on its compiler.

DESCRIPTIVE CATALOGUE OF THE PARKES MUSEUM, maintained by the Sanitary Institute. London, 1902.

The Parkes Museum was founded in 1876, incorporated and removed to Margaret Street, London, W., in 1882, and amalgamated with the Sanitary Institute in 1888. The purpose of the museum is to serve as a means of practical demonstration and teaching for sanitary science, and is a

great help in acquiring the technicalities of Public Health work. More room is needed, as the present space is much overcrowded. A fund, amounting to £7,000 in 1901, has been started for the purpose of providing a new building. The catalogue contains illustrations of the exhibits, and is made more useful by the ground plan.

THE BRISTOL MUSEUM AND REFERENCE LIBRARY. Report of the Museum Committee for the year ending 30th September, 1902.

Progress is being made in arranging the botanical collections. The bird collection has been refitted and arranged. The entire reconstruction of the drainage of the building has been completed at a cost of £430 12s. 1d., which was paid out of the ordinary income. The Egyptian objects have received special attention. A large and valuable series of Liassic and Rhætic fossils has been obtained from the New Clifton Estate and from Aust Cliff on the Severn, two large and characteristic specimens of the Rhætic bone bed. Sir W. H. Wills is, at a cost of about £40,000, building an extension of the museum as an art gallery, which is approaching completion. In February, Lady Smyth presented to the museum the collection of natural history specimens brought together by the late Sir Greville Smyth, embracing several thousands of eggs, amongst them one of the Great Auk, and one of the *Æpyornis maximus*, both in perfect condition, many birds' skins, a magnificent collection of lepidoptera and exotic coleoptera. The collection is reported to consist of from 28,000 to 30,000 specimens. In the classification of this invaluable gift, the committee has been assisted by Mr. A. E. Hudd and Mr. G. C. Griffiths as regards the lepidoptera, and by Mr. H. J. Charbonnier as regards the eggs and nests. It is intended in the new building to set apart one of the apartments as a "Bristol Room" for objects of local interest. Mr. P. F. Sparke Evans has defrayed the cost of a "West of England" case, shewing a natural history group illustrative of different forms of life found in the west country, the chief of which is intended to be a fine example of the red deer of Exmoor. The committee have associated with themselves a small advisory committee to assist in special matters. The list of gifts to the museum, in addition to those mentioned,

comprises old cannon balls, and, from the old bed of the Frome, portions of antlers, a bone needle, fragments of pottery, &c.; four bronze implements found by a boy at Coombe Dingle in 1899, Bristol China, &c. The purchases include some fine Bristol ware, two minute books and two banners of the ancient Wire Drawers' and Pin Makers' Company of Bristol, the books having entries dating from 1497, the banners dated 1705, an official mace dated 1761, and a series of local birds. The museum was open on 261½ days during the year, and was visited by 116,740 persons, a daily average of 446.

GLASGOW ART GALLERY AND MUSEUM, KELVINGROVE.—CATALOGUE OF LOAN COLLECTION OF PICTURES BY FRENCH AND BRITISH ARTISTS OF THE 18TH CENTURY. Price Threepence.

This collection is the result of a special effort made with the intention of launching the Glasgow Art Gallery and Museum, in their new buildings in Kelvingrove Park, and of enhancing the value and attraction of the enterprise. The most important works are Boucher's "Triumph of Amphritite," Largilliere's Marquise de Vandernesse, Pater's "The husband deceived and beaten," Loo's portrait of Madame Favart, Nattier's portrait of the Comtesse of Neubourg and her daughter, perhaps the finest example of the work of the greatest French portrait painter, and other good paintings of the same school lent by Mr. Reginald Vaile; a most admirable series of the work of Fragonard, including the beautiful picture, "Love and the Maiden," lent by Mr. J. Pierpont Morgan, who brought them from Grasse; and some very fine examples of the work of Reynolds, Romney and Gainsborough; Hoppner's lovely portrait, "The Sisters," lent by Sir Charles Tennant, Bart.; and a remarkable set of the imaginative work of William Blake, including "The Canterbury Pilgrimage." The Glasgow Committee are to be warmly congratulated on the success which has attended their efforts, as they have got together a most representative collection of the best periods and one which will not be readily repeated. A word of praise is due to the compiler of the catalogue, the short biographies of the respective artists are well and correctly written and the elucidatory notes really do elucidate, which notes on pictures sometimes fail to do.

THE MANCHESTER MUSEUM, OWENS COLLEGE.

Publication 35. Museum Labels. The principal divisions of the Lepidoptera.

This is a list of labels drawn up in accordance with the Cambridge Natural History for the benefit of curators, which may be purchased from the authorities of the museum.

Publication 36. (Notes No. 7.) On the Cairn and Sepulchral Cave at Gop, near Prestatyn, by Professor W. Boyd Dawkins.

The cairn stands at an altitude of 820 feet at the north end of the eastern boundary of the Vale of Clwyd, and the excavation of it was undertaken at the cost of the owner of the estate, Mr. Pochin, in 1886-7. Some fourteen skeletons, interred at different periods, pottery of the Bronze age, and numerous remains of wild and domestic animals were discovered. Altogether a most interesting and noteworthy exploration.

Publication 37. (Notes No. 8.) On *Xenophyton radiculosum* (Hick), and a Stigmarian rootlet, probably related to *Lepidophloios fuliginosus* (Williamson), by Professor F. E. Weiss.

The *Xenophyton* is a new fossil plant found by Mr. Cash at the Cinder Hills, Siddal, near Halifax. This and the Stigmarian rootlet are fully described and explained in the text, and by means of admirable photo-micrographs.

Publication 39. (Notes No. 9.) British Cephalopoda, their Nomenclature and Identification, by W. E. Hoyle, M.A., M.Sc., director of the museum.

This is an interesting monograph on the cephalopoda, with a justification of the nomenclature adopted by the author, and —that most useful of things to other workers—a complete bibliography.

Publication 40. Descriptive Catalogue of the Embryological Models, by Professor S. J. Hickson. Price Two Shillings. (2nd ed.)

To the student few things are more necessary than a set of accurate models, and these wax models here described are the finest we have ever seen; like all the best of their kind they are made in Germany by Dr. A. Ziegler. The series contains the development of the amphioxus, torpedo, frog, chick, dog, rabbit, human, starfish, marine pelagic larvæ, and great water beetle.

COUNTY BOROUGH OF CARDIFF. The Welsh Museum of Natural History, Arts, and Antiquities. Report for the year ending March 31st, 1902.

It is contemplated to build a new museum and art gallery in Cathays Park at a probable cost of £30,000. Subsequent to the representations of the Cardiff Cymmrodorion Society on the subject, it was decided by the council to alter the name of the museum to "The Welsh Museum of Natural History, Arts, and Antiquities." New cases have been introduced in the First Antiquities Room, which has been cleaned and painted. Mention is made of the death of Mr. J. Storrie, for fifteen years curator of the museum. The W. H. Vivian collection of British lepidoptera, containing about 20,000 specimens, has been presented to the museum by Lady Maude Vivian. The Fine Art Department has acquired "A View near Lake Avernus," by the Welsh artist, Richard Wilson, and two bronze busts, by W. Goscombe John, A.R.A., who is a native of Cardiff. Mr. W. S. de Winton has presented sixteen pieces of Swansea and Nantgarw porcelain, amongst them a magnificent vase painted by William Pollard. An old carved ivory leaf of a thirteenth century diptych and some fine examples of Roman tesselated pavement have also been added to the museum. 84,981 persons visited the museum on the 323 days on which it was open. There is an excellent appendix, giving notes on the additions to the collection.

AUSTRALIAN MUSEUM, NEW SOUTH WALES. (1) Report of the Trustees for the year 1901.

(2) Report for the year 1901. (From the Records of the Australian Museum, Vol. IV., No. 6, 31st May, 1902.)

Mr. T. Cooksey has been appointed consulting mineralogist and Mr. C. Anderson, late of Ben Nevis Observatory, mineralogist. 166,676 people visited the museum, an increase of 49,749 for the year, due largely to the visit of H.R.H. the Duke of York. As is so usually the case, the amount of income is "far from sufficient to enable the trustees to keep the Australian Museum in a proper state of efficiency, and maintain it in its proper place in the first rank of the scientific institutions of the Commonwealth. By reason of the inadequacy of income the trustees have hitherto been prevented from

carrying out much needed schemes, such as the appointment of a collector, the extension of the library, the purchase of specimens, and other matters urgently required to keep the institution abreast of the times." As this is the Statutory Report, in it a complete abstract of accounts, with lists of additions, &c., are to be found, but further details are given in the curator's report published separately. Mr. Etheridge remarks that in everything but financial matters the museum is in a very satisfactory state. The two new half-galleries in the south wing have been finished, and wall-cases provided in them for the ethnological collection. From Lord Howe Island Mr. Thompson has sent insects, fishes, and crustacea; Messrs. Power and Stephen, from Ocean and Pleasant Islands, sent 428 crustacea, 10 echinoderms, 64 fishes, 5 birds, 6 reptiles, and 24 insects and arachnids; Mr. Thorpe, Mr. Grant, and Mr. Lucas also contributed specimens. A total of 14,954 new specimens was received during the year 1901. An important feature of this museum is the dissemination of information on natural history and economic subjects to both public bodies and private individuals. In every department there is abundant evidence of good work and steady progress, hampered sadly by that most curious and short-sighted State policy which apparently believes that museums are playthings and of no value save to the idle street loafer; some day the colony will awake to its mistake.

ANNALS OF THE SOUTH AFRICAN MUSEUM.

The last fascicule of this, to be received, follows the curious numbering commented on in our last notice of this publication, and is lettered outside, "Vol. II., Part X., XIII., (Part II.). Inside, it is XII., not XIII.: but that is a detail. The part, which consists of pages 255—446, is devoted to a continuation of "The Moths of South Africa," by Sir G. F. Hampson, and deals with the Noctuidæ. The first part of Sir George's classification, as he calls it, was noticed in the *Museums Journal*, Vol. I., p. 79 (Sept., 1902), and we are glad to observe that the author has taken to heart our criticism, and now gives the present whereabouts of the type-specimens of his new species, at least in the majority of instances; but why

he does not do so in all is not quite apparent. For most of the new species the types are selected from the rich collection of the British Museum, but the Druce collection has also contributed many. In addition to new species, this contribution proposes a considerable number of new genera, and these facts make us wonder the more that not a single figure of a single form is vouchsafed to us. We hope that this does not indicate a policy of retrenchment on the part of the authorities of the South African Museum. Perhaps they felt that it was not incumbent on them to provide illustrations of specimens in other museums.

Apart from this very serious deficiency, the work, written as it is by so eminent an authority, will, of course, be valuable to all interested in South African entomology. The price of the present part is 6s.

General Notes.

AT HOME.

MUSEUMS ASSOCIATION.—The annual conference will this year be held in Aberdeen, commencing on Monday, July 13.

A STATESMAN'S VIEW OF MUSEUMS.—The following extract from a lecture delivered at the Owens College, Manchester, on February 4, by Mr. Jas. Bryce, M.P., shows a broad appreciation of the higher life of a municipality:—

He thought it was not going too far to say that every great city ought to have five things to represent its intellectual life and its functions as an organ of culture. First, it ought to have its library, its archives, in which the local records were stored. In the second place, it ought to have its natural history museum, in which everything appertaining to the geology, the botany, and the zoology of the district was represented; in the third place, its historical museum, in which might be traced the history of the city or district from prehistoric times; fourthly, its commercial museum, containing specimens of all the industries prosecuted in the neighbourhood and the natural products used; fifthly and lastly, it ought to have its art galleries. All these five sections ought to be in an organic relation to each other, and in relation also to two central authorities, one the municipality and the other the university. The provision of all that appealed to the taste and intelligence of the people need not cost any great sum of money. He believed that all these things might be done at a very small cost indeed compared to the total expenditure of such cities as Manchester and Liverpool, and that to a great extent they need not come upon the ratepayers at all, because when once the municipality set an example of what ought to be done, set before it a high ideal of what the city required, it

became comparatively easy to get from subscriptions and bequests such funds as were necessary. In Manchester we seemed, he thought, to have special advantages for making our municipal life vigorous and influential and beneficial to the whole community. We had in the Owens College a great seat of learning, whether it was called a university or not—and he supposed before long it would be—and we had also traditions of political thought and action and characteristic doctrines and traditions of great men like Richard Cobden and John Bright. We had also the tradition of a taste for art and of liberality of purchasing works of art and putting them at the service of the community, and, lastly, the great tradition of scientific progress. No city, he thought, could better set the example to other cities of the kingdom of using the powers of local government for promoting the instruction and refining the taste and increasing the happiness of the people.

BOOTLE MUSEUM LECTURES.—The prospectus of the Free Lectures given in connection with the Free Public Library and Museum of the Borough of Bootle for the 16th season, 1903, embraces a diversity of subjects from the Age of Ice to the South African War, and is made more useful by the indication in the margin of such books bearing on the lectures as are in the library.

TRING MUSEUM.—Mr. Walter Rothschild's museum at Tring has received a fine collection of birds from the island of Hainan, the zoology of which, probably owing to its deadly climate, is almost unknown. It was here, it may be recalled, that that accomplished naturalist and skilful collector, the late Mr. Whitehead, died while engaged in an effort zoologically to explore the island. It is of interest to note that the present collection has been made by Japanese collectors, who are rapidly becoming adepts at this kind of work. Mr. Rothschild has three Japanese at work in the exploration of Hainan, and the results, when complete, should prove of exceptional value in contributing to our knowledge of the fauna of that part of the world.

CARNARVON MUSEUM, NORTH WALES.—Without showing any great enthusiasm in the cause of museums, the town council of Carnarvon have taken steps to acquire the collections of coins, local antiquities, &c., in Carnarvon Castle, to form the nucleus of a museum. One member of the council very wisely suggested that it would be better to let the collections go to the University College at Bangor, where some good use could be made of them.

LEEDS ART GALLERY.—The committee of the Leeds Public Art Gallery may be very heartily congratulated on their latest acquisition. Having a bequest of £1000 from the late Mr. C. G. Oates, of Meanwood, for the purchase of pictures, they have acquired a small version of one of Holman Hunt's most famous pictures, "The Shadow of Death." The great picture under this title which, after being shown all over the country, found a resting-place in the

Manchester Art Gallery, was completed in 1874, whereas this smaller one bears date 1870-3, and so may presumably be regarded as a highly finished preliminary study for the later work, which an official note rather unkindly styles an "enlarged replica." A replica the Manchester work cannot be, for a comparison of the Leeds picture with Stacpoole's engraving shows innumerable, and most interesting, alterations of details.

LIMERICK MUSEUM.—The Board of Works has presented to the new museum about to be erected in Limerick, Ireland, a mortar taken from the river Shannon. This is probably one of the mortars used at the siege of 1691.

NATURE-STUDY EXHIBITION.—In connection with the North of England Educational Conference, at Manchester in January, an exhibition was held, at the Municipal School of Technology, of school work and material, chiefly, but not exclusively, illustrating the methods employed in different classes of schools in various districts, generally in applying the opportunities of school life to the study of nature, and specially in the teaching of experimental science. Amongst the exhibits are illustrations of school gardens from Kent and Surrey, with specimens of actual grafting and budding done by children of elementary school age; some excellent botanical specimens from the Central Higher Grade School, Bolton; some very interesting studies of nature are sent in by the Manchester High School for Girls, which also submits an excellent scheme of work, shewing how different subjects are correlated to form one uniform system of teaching. There are also photographs of the girls at work; drawings of plants, flowers, and animals made by the pupils themselves; physiological experimenst illustrating the growth of plants; physical and mathematical apparatus constructed by the pupils. From Stockport (St. Peter's National School) there is a unique set of exhibits illustrating the physical geography and geology of Stockport and district, the accompanying photographs showing the boys at work on school excursions; and from Liverpool illustrated descriptions of school excursions during the summer holidays in North Wales and the Isle of Man, the inclusive cost of which has been found year by year not to exceed 15s. a week per head. The Sheffield branch of the Teachers' Guild, again suggests a valuable form of service, which might be carried out in other centres, by the specimens which it sends of "circulating collections" of objects illustrating animal and plant life; some of the specimens are of a kind which schools could not easily procure for themselves. It is, of course, needless to say that an opportunity is afforded the visitor to the Conference of inspecting the excellently fitted laboratories of the School of Technology itself.

EDINBURGH MUSEUM.—The whole of the Egyptian collection in the museum has been re-arranged and, as far as was required to bring it into line with the most recent discoveries, re-labelled. To further extend the opportunities of gaining information about the things of the land of the Pharaohs, a small guide to the Egyptian collection in the museum has been prepared, which in a quite popular form supplies much interesting matter about the subject generally, and deals in specific detail with the various classes of objects exhibited. It is from such objects that the Egyptologist now-a-days builds up a tolerably clear and easily understood history of the social life of this great people of the ancient world.

THE PERTHSHIRE NATURAL HISTORY MUSEUM, PERTH.—This museum, which was founded by the Perthshire Society of Natural Science, has now been formally taken over by the municipal authority of the city. The present building was originally opened in 1881, and an addition, which was subsequently erected, was opened by the late Sir William Flower in 1895. The museum consists of two departments, a regional or Perthshire collection, and an index or type collection, both of which are arranged on a strictly scientific plan. The Perthshire department has been acknowledged to be one of the most complete regional museums in the country. The entire cost of building and equipping the museum, as well as the cost of maintenance during the past twenty-one years, has been born by the society, although the museum was at all times open to the public free of charge. It was thought, therefore, that the responsibility of the future support should now be undertaken by the public authority, and the museum was accordingly offered by the society to the town council as a free gift, on condition that the council undertook to maintain it in a thorough state of efficiency, under the charge of a fully qualified scientific curator. After a considerable amount of negotiation, the town council has now agreed to accept the gift on these conditions, and the property has been formally handed over to them. For the first five years, however, the society has undertaken to provide the whole expense, and during that period the museum will be managed by a committee consisting of representatives of the town council, the society, the county council, and the school board. The museum was originally organised with the assistance of voluntary workers from amongst the members of the society, prominent amongst whom were Sir Thomas Moncreiffe, Dr. Buchanan White, and Colonel Drummond Hay, all of whom are now deceased. Since the opening of the new gallery, however, in 1895, it has been under the charge of Mr. Alex. M. Rodger, formally of University College, Dundee, who has

arranged the collections in a manner which has left nothing to be desired. As the new governing body retains the services of Mr. Rodger, the policy of adhering to a strictly scientific scheme of arrangement, while at the same time making the museum as attractive as possible to the general public, will be adhered to. As the citizens will now feel that the museum is their own property, they will doubless take even greater interest in it than formerly.

EDINBURGH MUSEUM OF SCIENCE AND ART.—Since his appointment as director of the Edinburgh Museum of Science and Art, Mr. F. Grant Ogilvie has given special attention to the development of the library of the museum, and the Scottish Education Department have now published a list of books, &c., prepared by him, relating to ornament and decoration, which is available for consultation by the public in the library. The catalogue has been compiled chiefly for the use of students, designers, art craftsmen, and visitors, and has been prepared with the view of giving ready access to the information contained in the books on the subject, as well as in the more important serial publications filed in the library. The lists already issued under the subject-headings of architecture, furniture, arms and armour, textile fabrics and costume, pottery, and glass, form sub-divisions of the general catalogue of the library. The books and other writings dealing with each of these subjects are therein further classified under periods and nationalities, so as to facilitate reference and research in those directions. The present list goes somewhat further. It is both more comprehensive and more detailed than these: and the classification of many of the references in the table of contents under the names of the commonly known forms of art-work and of individual art objects provides a ready means of extending the information given on the labels about the specimens in the museum. As an index to the illustrations and to the literature of the subject, this list directs the student to the works in the library in which the collections in other museums are figured and described, and it also supplies references to much practical information of a kind often of immediate use to the designer and art workman. Thus, while references are given to books on the history of the styles of ornament, and to kindred works of a more or less theoretical nature, the craftsman will find under many of the headings—such as ceilings, dadoes, tiles, &c.—a guide to information of an entirely practical sort, and directly bearing on the methods and practice obtaining in the workshops of to-day. The table of contents is divided into four sections. The first is headed "general," and calls attention to books which deal with the subject in such a way as scarcely admits of the

classification of their contents in detail, but whose titles sufficiently indicate their scope. The second section of the contents enumerates a number of forms of art-work, and of art objects which properly come under the heading of "Ornament and decoration." For greater convenience of reference, the various objects in metal are classified separately as Section III.; while Section IV. deals with the processes, history, and examples of the illustration of books.

SUNDAY OPENING IN GLASGOW.—At a meeting of the members of the Royal Scottish Water Colour Society held in Glasgow, it was resolved to open their exhibition in their galleries in Sauchiehall Street for three hours on Sunday afternoons. No Sunday labour will be employed, the members of the society acting as attendants, nor will there be a charge for admission.

PROPOSED EXTENSION OF ABERDEEN ART GALLERY.—The committee of management of the Aberdeen Art Gallery have had submitted to them sketch plans by Mr. A. Marshall Mackenzie, A.R.S.A., giving effect to the suggestions of Sir George Reid, P.R.S.A., who recently advised the committee as to the best form of the proposed extensions. The scheme provides specially for a sculpture gallery, and the estimated cost is £5,000. It was reported by the chairman, Mr. Murray, Glenburnie Park, that Mr. Sargent's portrait of Mr. Fyfe, of Beechgrove, subscribed for by members of the granite trade, was to be presented by Mr. Fyfe to the art gallery.

KEW HERBARIUM.—An important addition to the amount of room available at Kew Gardens for the storage of dried plants has been made by the large new building which has just been completed and fitted to serve as the new Herbarium. For many years past the most pressing want of Kew has been an extension of the Herbarium, and this want has now been met in a manner which will enable the authorities not only to properly arrange the ever-increasing number of plants which call for preservation in a Herbarium, but also to find room for the students who desire to consult them. The transfer of the royal gardens from the charge of the office of works to that of the board of agriculture, which has been agreed to by the government, will not take effect until the new financial year, beginning on the 1st of April, 1903. In the meanwhile, a departmental committee is at work with a view to the carrying out of the transfer in its details, and it is anticipated that all questions concerning economic botany will in future be referred by the board of agriculture to the Kew authorities.

ABROAD.

CARNEGIE MUSEUM, PITTSBURG, U.S.A.—The proposed additions are postponed, pending the result of proceedings taken to secure the condemnation of adjoining land, but it is hoped a satisfactory decision may soon be reached.

U.S. NATIONAL MUSEUM.—Friends of the U.S. National Museum are awaiting the action of the present Congress in regard to the proposed new museum building with both interest and anxiety. Not only are the present quarters utterly inadequate for the accommodation of the collections, so that valuable material is stored where it is in danger of being destroyed by fire, but the character of the building is such that it would not be thought fit for a station of any prosperous railway.

FIELD COLUMBIAN MUSEUM, CHICAGO.—There has just been placed on exhibition a series of four groups, design ed and executed by Mr. Carl E. Akeley, illustrating the life-history of the Virginia deer. These groups, entitled "The Four Seasons," depict the deer amid their natural surroundings in Spring, Summer, Autumn, and Winter, and are the finest examples of their kind in existence. Some idea of their elaborate character may be gathered from the fact that their preparation has extended over several years, and has involved an outlay of over £2,000. Each group comprises four animals, taken at the proper time of year, in the adjoining state of Michigan, while the accessories shew the nature of the country frequented by the deer, and the characteristic plants. The four groups form as many sections of one large glass case, each section being 10 × 10 feet. The inner corners are rounded, so that there is no break in the background, which occupies the two inner sides, and the accessories are so cleverly merged into the background, that the effect of distance is very perfect. Each of the outer sides is a single plate of glass, and there is no post at the outer corner, the edge of one glass abutting on the other, with merely the intervention of a strip of felt, and the aid of a single metal clamp. The sections can be separated and arranged in pairs, or placed one in each corner of a hall.

VICTOR HUGO MUSEUM, PARIS.—That venerable disciple of Victor Hugo, M. Paul Meurice, goes daily to the museum he is founding in honour of the poet to oversee and press forward the artisans and artists engaged in making it ready for the public. The death-room of Victor Hugo is nearly ready, and all the dressers, tables, chairs, and other furniture made by him are in their places. He had a rare turn for

carpentering and cabinet making, and for touching with his imagination his handiwork. M. Louis Kock, who made a collection of Victor Hugo souvenirs, will at M. Meurice's recommendation be named by the city of Paris curator, and M. Bauve librarian of the museum, which will contain first editions of all Victor Hugo's works, albums made with cuttings relating to him, drawings, engravings, and photographs of him and of the houses he lived in. M. Kock is a former examiner under the University of Paris, an ex-Professor, and by no means rich. He gives away a fortune in endowing the museum in the Place des Vosges (Place Royale that was) with his collection, part of which he inherited from his aunt, Madame Juliet Drouet, who had been for so many years the secretary of the poet. Victor Hugo amused himself in exile at Guernsey by furnishing a small house for her with furniture of his workmanship. M. Brown, Inspector of Fine Arts, and son of John Lewis Brown, the painter of hunting scenes, is the official clerk of works in organizing the Victor Hugo museum.

Zoological Research in Uganda.—Mr. J. S. Budgett, of Cambridge, has recently returned from a zoological expedition to Uganda. He originally intended to visit the Semliki forest to search for the Okapi, but as the Nile route homewards seemed more suitable for the study of the life-history of polypterus, an archaic fish, the life-history of which is still a problem awaiting solutiion by zoologists, Mr. Budgett abandoned the Congo route, and returned home by the Nile. Elephants in very large herds were frequently met with in proceeding through the Budonga forest. Mr. Budgett spent several weeks at Fashoda, where he made many anatomical preparations of fishes, and throughout the journey he collected birds, mammals, and fishes, and has brought back data of considerable interest concerning the zoology of the region traversed. Among other observations, a striking parallelism of the country of the Nile Province of Uganda, in its flora and avi-fauna, to that of the Gambia Colony on the West Coast of Africa, previously visited by Mr. Budgett, was especially noticed.

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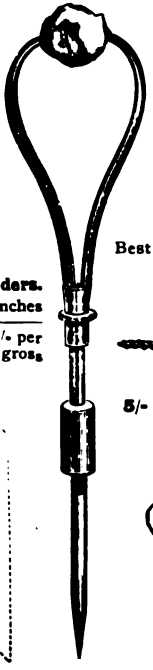

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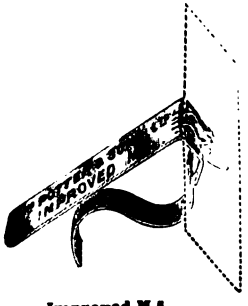

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Also for ⅓ inch shelves at same price.

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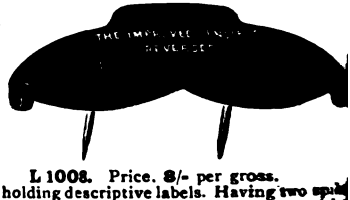

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For holding descriptive labels. Having two spik it is absolutely rigid when once pressed into positio

☞ A Sample will be sent Free on application.

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Label Holder.

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Will take stout
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	per gross.
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,, 2. ,, 1⅜ in.	6/-
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The Aldersgate Stand (Patented)

For supporting descriptive cards at any angle.

Small size, 2 in. by 1⅜ in. .. 10/- per gross

Large size, ½ in. by 2½ in. .. 24/- ,,

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are stocked in various styles and sizes.

Specification, with Estimate, furnished free, for any kind of Case, on receipt of particulars.

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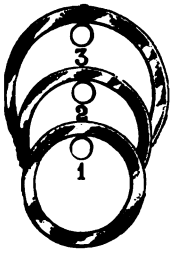


Metal Rim Tabs.

With white card centres, in six sizes.

No.	Size.	Price.
1	½ Diam.	3/6 per 1000
2	11/16 ,,	4/3 ,,
3	¾ ,,	5/- ,,
4	1 ,,	7/9 ,,
5	1⅛ ,,	9/- ,,
6	1⅜ ,,	12/- ,,

No. 18.—Metal Box for Specimens.

Round, Silver colour shouldered, and dust tight.

WITH GLASS LIDS.

No. 1 size—	1½ in. by ⅝ in.,	10/6 per gross
No. 2 size—	2 in. by ¾ in.,	13/6 ,,
No. 3 size—	2½ in. by ⅞ in.,	16/- ,,
No. 4 size—	2½ in. by 1 in.,	21/- ,,
No. 5 size—	2⅞ in. by 1 in.,	24/6 ,,
No. 6 size—	3½ in. by 1⅛ in.,	29/6 ,,

ALL METAL.

No. 7 size—	1½ in. by ⅝ in.,	7/6 per gross
No. 8 size—	2 in. by ¾ in.,	9/6 ,,
No. 9 size—	2½ in. by ⅞ in.,	10/6 ,,
No. 10 size—	2½ in. by 1 in.,	13/- ,,
No. 11 size—	2⅞ in. by 1 in.,	15/- ,,
No. 12 size—	3½ in. by 1⅛ in.,	17/6 ,,

N.B.—Not less than One Gross of any size or kind supplied.

Round Glass-Top Boxes.

Cardboard, covered steel-blue paper.

In six sizes, nested.

Size 1.	1⅛ in. x ⅝ in. ...	14/- per gross.
,, 2.	1⅝ in. x 1⅛ in. ...	16/- ,,
,, 3.	1⅞ in. x ⅞ in. ...	18/- ,,
,, 4.	1⅞ in. x 1⅛ in. ...	20/- ,,
,, 5.	2½ in. x 1⅛ in. ...	24/- ,,
,, 6.	2½ in. x 1⅞ in. ...	32/- ,,
	or, assorted equally ...	21/- ,,

No. 14.—Glass-Topped Specimen Boxes.

Lined white paper inside and black outside. As used at the Geological Museum, London.

No. 518. Mahogany Plate-Glass Case.

Clear plate glass all round and top, carved pediment. Inside fitted with one full-sized plate-glass shelf, 4 tapped bars and brackets. Splendid case for centre of room.

Height, ins.	Width, ins.	Depth, ins.	A Quality, air-tight.	B Quality, without pediment or inside fittings.
36	36	24	£15 5 0	£9 17 6
36	48	24	18 10 0	12 15 0
36	54	30	21 15 0	15 10 0
48	60	30	25 0 0	18 10 0

Table or Stand for above, 37/6, 57/6 & 72/6 extra.

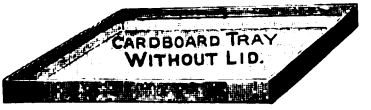
Glass Show Cases made for all purposes—any size or shape. Estimates and drawings supplied on application.

No.	Length.	Width	Depth.		
1 size—	2 in. by	1⅛ in. by	¾ in. ..	18/-	per gross.
2 size—	2⅛ in. by	1⅜ in. by	1 in. ..	21/-	,,
3 size—	3 in. by	2¼ in. by	1¼ in. ..	24/-	,,
4 size—	3½ in. by	2½ in. by	1⅜ in ..	27/-	,,
5 size—	4 in. by	3 in. by	1⅝ in. ..	31/-	,,
6 size—	4⅛ in. by	3¼ in. by	1¾ in. ..	36/-	,,
The above 6 sizes, assorted equally ..				27/-	,,

Outside measurements are quoted. Any other size, shape, or quality made to order.

Also extra stout make in the following sizes covered green Cloth.

8 in. by	6 in. by	1¾ in.	24/- per doz.
10 in. by	8 in. by	2 in.	30/- ,,
12 in. by	9 in. by	2½ in.	36/- ,,
14 in. by	10 in. by	3 in.	42/- ,,
16 in. by	12 in. by	3½ in.	48/- ,,
18 in. by	14 in. by	4 in.	60/- ,,
20 in. by	16 in. by	4 in.	72/- ,,



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Same length, width, and finish as boxes No. 14, but are ½ in. high.

Size	1	2	3	4	5	6
	4/-	5/-	6/-	7/6	9/-	10/6 per gross

Larger sizes to order

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HENRY IRVING, The Rowans, HORLEY, SURREY.

THE MUSEUMS JOURNAL.

Vol. 2. *March, 1903.* *No. 9.*

Voluntary Help in Museums.

A LITTLE consideration of the scope of ordinary museum collections in relation to the entire domain of human knowledge ought to excite the greatest admiration for the curator who is supposed to set forth these collections so as to display a complete understanding of their origin, history, and purport. That no single human being can possess the knowledge or ability to carry out such a task will be admitted by most rational people, yet the public expect that the various departments of a museum shall be orderly arranged, the specimens carefully named and accurately described. In some of the larger museums the curator or director may have the aid of qualified assistants, though, as a rule, his helpers are not numerous enough to cover the wide and varied range of work in a museum. And this range and variety is often as wide in a small provincial museum as in a large one, for although the actual number of specimens may not be the same, the branches of science or art which they represent require similar special knowledge for their proper exhibition and adequate elucidation, yet it is impossible to engage a competent salaried staff out of the limited means allowed under the Library and Museums Acts. Possibly, now that the value of museums is increasingly recognised in the educational system of the country, greater financial support will be duly accorded to them, thus mitigating the difficulty arising from the lack of qualified help, though it cannot entirely overcome it. Even at the British Museum outside help is sometimes useful and acceptable.

Possibly the museum best equipped with the necessary knowledge for dealing with its collections is the one associated with a college or university, and it would be interesting to

have a detailed account of the administrative and working system of such a museum—Manchester or Nottingham for instance. But only few towns have colleges, and, fewer still, universities, and it is therefore necessary to look to other local sources for the requisite knowledge, skill, and will to carry out museum work.

Quite recently the chairman of the museum committee in Liverpool referred to the need of outside help in order to make the most use of the museum collections, and his suggestion is one well worthy of consideration. Liverpool has been greatly extending its museum buildings, and the time has arrived for a total re-arrangement of the collections in that hitherto not very attractive museum. Probably there is no museum in the kingdom, with the exception of the British Museum, with such extensive and valuable archæological and natural history collections as Liverpool possesses, yet it cannot claim anything like the general attractiveness or popular usefulness of many smaller museums. To specialists and advanced students it is a kind of "Mecca," second only to the British Museum, but even those people would probably admit that it would be more convenient to have one "Mecca" instead of two. At any rate the question of dealing with the collections on the lines of the expanded knowledge and greater educational requirements of the present day is now being seriously considered, and the result in this greatest of all provincial museums ought to bring useful hints to all curators. The Liverpool museum, with an annual expenditure of nearly £10,000, has unrivalled opportunities for dealing with the problem, while the many learned societies of the city, as well as the university college, contain experts in all branches of knowledge, whose special services, if they can be utilised, would be invaluable to the museum.

Other towns, less fortunate, have yet a good many specialists who could render distinct service to the museum, if their assistance could be obtained, and it might probably be found that this assistance would be rendered cheerfully and voluntarily if judiciously asked. Some museums publish a list of honorary curators in special departments, and there is no doubt that valuable help is given in that way. Such work might be systematically organised in nearly every town, for

the people who take an interest in museum subjects constantly increase in numbers, and there are few towns that cannot boast one or more scientific societies. With the improved and more perfect systems of registration now in operation, it is quite feasible to allow an outsider to study, name, and classify any particular collection, without interfering with the general scheme of the museum. For instance, having put the number tickets to a collection of butterflies, an outside entomologist would be able to name and classify them without any risk of confusing their history in connection with the museum, and all the curator would have to do would be to put the register number on the specialist's name label, corresponding to the number on the specimen, then he could obtain from the register all further particulars, and have the label written or printed. This would apply in the same manner to any other section of the museum, which by thus enlisting the voluntary aid of qualified citizens, would not only increase the usefulness of the collections, but would bring the public into more direct personal sympathy with it.

The Registration and Numeration of Museum Specimens.

PLYMOUTH.

E. Ernest Lowe, F.L.S.
(Curator, Plymouth Museum).

SINCE I first dealt with museum accessions some ten years ago, the imperfections of the systems at present in use have been constantly thrust upon me, and have led to as constant a seeking for a method of dealing with acquisitions in all their diversity which shall obviate the necessity for an extensive series of books and avoid waste of labour in the duplication of entries. When I became curator of the Plymouth Museum, the solution of the problem became more and more imperative every day, and as I have found many fellow curators labouring under the same difficulty, I hope I may be excused for bringing forward the results of my meditations in the hope that they may prove suggestive and useful.

The questions a curator may have to ask, for his own or other people's benefit, and which his registers and catalogues must enable him to answer, fall naturally under two heads:—

(1). "You have a certain specimen in your museum: will you tell me all you know about it?"

(2). "Have you certain material in your museum, and if so how much, where from, &c., &c.?"

We will call these "Requirements 1 and 2."

I find the following solutions put forward:—

(A). Systematic numbering, or lettering, according to a classification akin to Professor Dewey's book-classification, still to be drawn up.

(B). Classified card catalogues, plus registers of various kinds.

Solution (A) would at once simplify matters by rolling register and classified card-catalogue into one and giving us one place only for all information—if it were practicable. To

my mind it is not sufficiently so to justify our going on in a muddle and pinning our hopes of salvation to it. In the first place the task of drawing up such a classification would be vast beyond comprehension, and even if accomplished I question the advisability of adopting a system which would, in time, get completely out of date—for we are surely not going to be so arrogant as to consider that any system, however carefully planned, will not ultimately require great reconstruction. Such proposals as I have come across seem to take only the classification of natural science into account, at any rate as far as demonstration is concerned, whereas the field extends over every branch of human knowledge and investigation. With books and pamphlets the case is different, classification being chiefly a matter of convenience, and as long as the system is understandable it matters little if it is somewhat out of date. In the museum, however, classification has an infinitely more important part to play; it is in fact the basis of our work and aims.

It has been stated by Professor Petrie that, if specimens were numbered according to such a system, "any specimens moved could be re-arranged by unskilled assistance, solely by the numbers." With all due respect to so high an authority, I am quite unable to agree with this statement for the reason that museum material is so diverse in size, form, and method of preservation, that an unskilled assistant is scarcely competent to deal with its storage, to say nothing of its installation, upon which so much of the usefulness of a museum depends. Here again books do not present the same difficulty; their size and form vary only within certain limits, and it is a fairly simple matter to introduce a numbered book in its proper place on a shelf.

Solution (B) satisfies both Requirements, and the most satisfactory way out of the difficulty will, I think, be found in the best and simplest combination of card-catalogue with some system of consecutive registration.

The scheme I have adopted at Plymouth is of the nature of (B), and will be best explained by a series of actual examples with an account of the treatment applied in each case.

Last year the museum received, among other things,

1. A series of minerals from Mexico.
2. An antique oak box.
3. Delft pottery (three specimens).
4. A series of flint-making implements and specimens in various stages.

Supposing these to have been received consecutively they would have been entered in my Accession Book, as shewn below:—

PLYMOUTH MUSEUM ACCESSION BOOK.

1902.

Date.	No.	Class.	Description.	No. of Specimens.	Price.	From.	Remarks.
Jan. 28	1	Minerals	Minerals, collected by donor in Mexico.	70	Gift.	F. W. Bawden, Plymouth	All Regd 2nd Jun. 1902.
Feb. 1	2	Antiq.	Oak Box, carved with date, 1604, and initials, ML (= Mary Lethbridge of South Zeal, near Okehampton, the original owner).	1	Gift.	Mrs. Webber, Salisbury-Rd. Plymouth.	
,, 12	3	Pottery	Delft ware	3	Gift.	S. T. Whiteford, W. Kensington.	All Regd 5th Aug. 1902.
Mar. 8	4	Technol	Series of specimens illustrating Flint-making, from the Manufactory at Brandon, Suffolk.		£2/10/0	Wm. Carter, Brandon, Suffolk.	

In the column headed "Number" is placed a number following the order of accession, and this is inscribed on the specimen or parcel so:—

1'02, 2'02, 3'02, and so on.

These numbers have the advantage, not possessed by consecutive numbers, of dropping to unity again at the beginning of every year—this year's accessions, for example, being

numbered 1'03, 2'03, &c. Perhaps it will be argued that if the number of accessions be large then the number itself becomes unwieldy, e.g. 86987'02, making it no better than a consecutive number; or that '02 is not a sufficient indication of the year and should be 1902, making it more cumbrous still. I can only say that in practice the form I use does not become unmanageable, because six figures admit of 9999 different *accessions* (not *specimens*) in a year, or about 30 per day. Confusion from not writing the year in full could not occur more than once in a century, but if we wish to obviate the risk altogether then we must write it in full—and we shall still find the number a perfectly feasible one. If the specimens are too small to take such a number when neatly written, then they are of such size as to require the protection of a glass-topped box, or other covering, on which the number would be easily and properly inscribed. The time required to write these numbers on the specimens may be a little more than is required for straightforward numbers, but this is of little importance since unskilled junior assistance is employed for the purpose.

Now if it were possible to deal with every individual specimen as it came in, it would also be possible to make the accession book the sole register. But this would not be desirable for two reasons; firstly, because we desire our accession book to be a convenient and easily handled summary; and, secondly, it would be impossible, where several people are engaged in the registration of specimens, to manage with one book. Therefore the accession book should be no more than one man's work. The impossibility of dealing fully with everything as it comes in renders a register essential, and mine takes the form of *loose* stiff sheets, arranged in pamphlet cases (it might be on cards, or on sheets in a "sequence" or other file case); it must be on *loose* sheets of some kind to admit of *expansion*.

Taking the quoted accessions seriatim the method adopted was as follows:—

1'02. Minerals from Mexico. This parcel was numbered 1'02 and put away, as I hadn't time at the moment to deal with it. Nothing more than this number was necessary to refer me to all information concerning acquisition, or applying

to the parcel as a whole. When an opportunity occurred of giving them further attention, I took the parcel, looked over the specimens (most were already named), and then proceeded to number them $\frac{1'02}{1}$, $\frac{1'02}{2}$, and so on to $\frac{1'02}{70}$. I then took register sheets and entered the minerals as shewn on the following facsimile sheet I also made a note in the "Remarks" column of the accession book to the effect that this had been done (see specimen sheet), as a check on the register.

Accession Number.	Specimen Number.	Name, Description, etc.	Locality, Date, etc.
1'02		*MINERALS.*	*MEXICO.*
	1	Bismuth	El Carmen Mines, Zacatecas.
	2	Azurite, with Malachite	Mazapil Mines, Zacatecas.
	3	Oxide of Lead.. ..	San Juan Mine, Chihuahua.
	and so on to 70.	Sulphate of Copper ..	Velardina Mine, Durango.
3'02		*DELFT WARE.*	
	1	Jug, with Metal Lid on Hinge.	Lambeth Delft Works, Date, 1650.
	2	Jug, without Lid	
	3	Salt-cellar, with Tripod Foot.	Bristol Works, Date, 1740.

Register Sheet—Year 1902.

If the museum had been a large one with assistants in charge of the different departments, the assistant in charge of minerals would have received the sheets (or been given the

accession number to write on his own sheets, a supply of which would be given out for the purpose), and when filled he would have returned them to the office to be filed.

The numbers on the specimens are very compact (the fractional form is better than a long number), quite understandable, and refer one at once to full particulars.

2'02. Oak box. This was numbered 2'02, and as I was able to enter all the information concerning it in the accession book at the moment of receipt, it was immediately disposed of. No register entry was required.

The next accession (3'02—Delft pottery) was, I thought, disposed of, but I received later information which the form of my accession book entry did not permit me to include. I therefore numbered the jugs and salt-cellar after the same fashion as the minerals, $\frac{3'02}{1}$, $\frac{3'02}{2}$, $\frac{3'02}{3}$, and wrote the new details on a register sheet, following the last of the minerals, as shewn above—again making a check note in the "Remarks" column of the accession book.

Accession 4'02—Series of flint-making specimens. As with 1'02, I had no time to deal with this series in detail when received, so I simply made an entry in the accession book, and numbered the parcel 4'02, exactly as with the Mexican minerals. This accession still awaits detailed examination and registration; when time or assistance is found the individual specimens will be numbered and entered on the register sheets exactly as the minerals were.

From the foregoing examples a good idea will be obtained of the working of my accession book and register, which satisfy Requirement 1 by enabling me to give all particulars concerning any specimen by simply looking up its number. First I look in the accession book, and if the information I am seeking is not there, the presence or absence of the check note in the "Remarks" column tells me whether further information is to be found in the register sheets or not. The latter are arranged in chronological order, with guide-cards to indicate the years.

A Card Catalogue completes my scheme. This is practically nothing more than a full *classified* index to the register

sheets, and is of the same type as that described by Mr. Hoyle in the Museums Association report for 1891, page 62. I write a card for each specimen or parcel as the case may be, and insert it in its proper place under one of the following heads :—

Geology.	Archæology.
Botany.	Technology.
Zoology.	Art.
Ethnology.	Mixed Parcels.

This classification is further sub-divided by means of guide-cards, as occasion requires. In the case of a parcel, the parcel card is torn up when the specimens are dealt with individually, and replaced by several—one for each specimen, or series of similar specimens. In large museums each assistant would write a card for every specimen at the time he entered it on the register sheet, and arrange the card in proper order in the section of the card catalogue corresponding to his section of the museum. The different parts of the card catalogue would in this case be advantageously given into the charge of the heads of corresponding departments of the museum, who could, if thought advisable, distribute to each assistant his own special part.

This card catalogue fully satisfies requirement 2, and in conjunction with accession book and register sheets it supplies all needs. Though the system may seem complicated on paper, yet in actual use it is simple, quick, and efficient.

The systems now in actual use in museums resolve themselves, so far as I am acquainted with them, into three methods :—

(1). General Accession Book, in conjunction with numerical department registers and card catalogues, the specimens being numbered to correspond with consecutive entries in their respective registers—or to correspond with the Accession Book—or with both.

(2). Department Accession Registers, with the specimens numbered to correspond with consecutive entries therein, and with classed card catalogues in conjunction.

(3). Chronological Accession Book alone, with specimens numbered to correspond.

The objections to (1) are the duplication of entries; the number of different books required, corresponding to the number of classes; consecutive numbering, where the numbers go on for ever, getting more and more unwieldy every day, and the hesitation and difficulty which must always arise with a classified system of registration, *i.e.*, of specimens which may be placed in two or more classes with equal appropriateness—for example, an ancient vase, which may belong either to antiquities or art.

The objections to (2) are all those lodged against (1) except duplication, plus the fact that no rapid summary, of, for example, the year's accessions, is possible in the absence of a general accession book.

The objections to (3) are that requirement 2 cannot be readily met, and that it is not an expansive system—*i.e.*, it does not admit of additions at any point, unless sufficient space (often an unknown and almost unknowable quantity) be left after each entry. This is a vastly important consideration to the curator of an undermanned museum, where parcels of accessions may remain without detailed examination for considerable periods.

It frequently happens that a curator finds a great stock of old material in his museum which has either never been registered or numbered, or only recorded in some fashion and not numbered, or recorded and numbered in a manner which it is not desirable to continue. I have treated these three cases in as many different ways. Specimens absolutely without record and numeration have been treated as one or several accessions (according to diversity of subject and data), entered in the accession book under the year in which they were dealt with, and numbered, registered and card-catalogued on exactly the same principles as bona-fide additions—care being taken, however, to indicate their real nature in the accession book so as not to interfere with the task of summarising; specimens recorded and not numbered have been numbered with accession numbers corresponding with the old records

(the entries in the old record books being previously numbered for this purpose) and registered and card-catalogued in exactly the same way as recent accessions; specimens recorded and numbered in an undesirable manner have been simply card-catalogued, the old numbers and records being retained but not continued.

In the elaboration of the system I have constantly had in mind what seem to me to be primary considerations—*i.e.*, that the records shall be in one place (accession book and register sheets side by side); that there shall be only one series of numbers in the entire museum; and that, while entries may be brief and comprehensive when time and assistance are lacking, yet every essential particular may be recorded, and any amount of future expansion and development be possible. For the basis of the scheme I am largely indebted to opportunities of acquiring an intimate knowledge of the methods employed at the Warrington Museum by my former chief, Mr. Charles Madeley—an accession book such as I have described having been introduced by him twenty-five years ago—and to his valuable criticisms and helpful suggestions. I must also chronicle my obligations to papers by Professor Flinders Petrie, Mr. W. E. Hoyle, M.A.; Mr. H. Bolton, F.R.S.E.; and the late Dr. Brown Goode.

Museums and the Public.

An Outsider's View.

[From the *Liverpool Mercury*.]

TWO or three months ago a stranger visited Liverpool, and was anxious, naturally, to occupy his time to the best advantage, and with that object spent several days inspecting the local public buildings. Possessed of an inquiring and somewhat inquisitive mind, he expressed an opinion of disappointment after coming from the Liverpool Museum in William Brown street. He was most enthusiastic in his praise and comments on the contents of the museum; he would, he

declared, have enjoyed several days in examining the rich store which is there on view; but he was astonished to find in the course of his walk through the building that but few people were scattered about the rooms. Even the class of people he met did not satisfy him, for he described them as being, apparently, mostly emigrants, in addition to some men who were in the place more for shelter than for study. The emigrants were apparently interested in what they saw; so also were the others; but the number of genuine students might, so this critic asserted, have been counted on the fingers of one hand. When he left the city it was with a feeling that the people of Liverpool did not fully appreciate their museum.

It may, perhaps, be said that this man did not see the visitors to the museum under the best conditions; that he did not spend a whole day in the institution; that his attention was too much divided between the objects in the building and the people to enable him to form a fair judgment; and that he may, after all, be but a poor critic indeed. But in any case his conclusion is worth pondering over by the public, as well as by those who are specially interested in the matter, more particularly by those who are devoted to scientific knowledge, and afterwards by the museum sub-committee.

Does the average citizen appreciate the museum; is he attracted to it and led to examine its contents? The question is a pertinent one, and the writer, in his endeavour to obtain a true answer, has made some investigations. He found that most of the time of the business man is occupied in business pursuits, a glance at the daily newspaper, a slight interest in municipal matters and national affairs; but beyond those bounds he rarely goes, unless the attraction be very great. Probably he joins one of the branch lending libraries and pays a visit to the Autumn Exhibition at the Walker Art Gallery. But ask him how many times during the year he has visited the museum. Perhaps he will prefer to leave the question unanswered. On the other hand, he may make the boast that although he has lived in the city for over a dozen years he has never yet been inside its doors. Or it may be that as a boy he was taught to value highly the contents of the museum; he was often taken there by friends; but since he started in

business his time has been too precious, and in consequence he has been forced to give up the privilege. It has lost its attraction.

Why should he visit the museum? To a large extent the reply depends on the personality of the querist. But the question is worth answering, especially as the museum does not appear to be appreciated at its full value; a fact which the casual observer will long ago have made his own.

The popularity of the museum will not bear comparison with that of the reference library, or even with the permanent collection of pictures at the art gallery. The library undoubtedly stands pre-eminently first of the three institutions; the art gallery has the second place; and the museum, undeservedly, finds a low third. This, however, is not surprising, when it is considered that whilst the majority of people give time to reading, only a comparatively small number are interested in scientific or antiquarian studies. Nevertheless, it is greatly to be regretted that more do not take an intelligent interest in the vast and wonderful treasures in the museum. The Liverpool collection is particularly rich; it possesses objects of almost every branch of human activity, as well as specimens outside man's creation, such as birds, fishes, and wild beasts. It has associations connected with most of the 'ologies—geology, mineralogy, entomology, meteorology, anthropology, ethnology, &c. All these are represented by an enormous collection, the mere fringe of which is far too elaborate for detailed reference in this article. Then, too, there is that most valuable department, the Mayer Museum, which contains remains of ancient primitive man of Europe and Asia —a period remote from the times of written history; and also a collection of implements and specimens of uncivilised man of modern time, and of many parts of the world. This treasure—for such, indeed, it is—covers pre-historic, Egyptian, Babylonian, Assyrian, Mediæval, and later antiquities; and it may be mentioned that the latter includes the Mather collection of miniatures and medals relating to the Bonaparte family.

Goethe, in one of his maxims, says: "The best that history has to give us is the enthusiasm which it arouses;" but

here is a museum, crowded to its doors with the materials of past ages, representing generation after generation, age after age—representing, in fact, pages of the world's book of life and progress; and yet it does not easily stir the average man's continued interest. The fault cannot rest with the objects; they are there and always open for public inspection. If fault there be, therefore, it must be in the citizen; and, if he be willing to remain in ignorance of the great importance of such a museum as an educational institution, his loss is inconceivable.

There are some people, however, who do not, unfortunately, look upon the museum from this point of view; they regard it rather as a storehouse of curiosities arranged to please and amuse. Certainly there are curiosities in every museum; but they consist of natural, scientific, artistic, and literary specimens, displayed both to please and to instruct; and if they amuse no harm will be done, though the fact may be insisted that their original and foremost purpose is to educate. An effort should be made to popularise the museum; and, once the public are drawn to the place, its attraction will surely grow upon them. How can this be done? Of course, the very fact that the building is open free of charge should be an incentive to visitors; but this, as experience shows, is not enough. As one interested in scientific pursuits, the writer suggests that what is wanted is a small, popular guide to the contents; a catalogue lacks interest, and is too full of dry facts. The "Bulletins" recently issued were excellent; but not only were they too costly for the average man, but some thought they were also far too technical and "scientific." Written in straightforward, simple language, dealing with the various departments, and embracing plentiful explanation, as well as numerous illustrations, a handbook would doubtless prove of immense service to the general public, and would be a real inducement to many to take a genuine interest in one of the most useful of our local institutions.

Books to Read.

THE SCIENCE OF LIFE: An Outline of the History of Biology and its Recent Advances, by J. Arthur Thomson, M.A. London. Blackie and Son, 2/6.

This little book belongs to what is known as "The Victorian Era Series," which form a record of the great movements and developments of the age, so rich in new lines of discovery, as well as in social progress. In no department of science, art, or sociology was there so vast a development as in the study of biology, which, during the life of Queen Victoria, emerged completely from the nebulous mysteries of theological obscuration into the broad light of experimental facts. It is difficult for the present-day student of biology to realise the impediments which surrounded the study of that science before the promulgation of Darwin's views of evolution, which now furnish the key to all biological and sociological problems, and he will have a truer and more expanded knowledge of the subject after reading this admirable book, which, as the author states, "is an attempt to illustrate the growth of biology from an embryonic state of insignificance to a position which is central among the sciences, and full of influence, even on the art of life." Prof. Thomson writes in his customary clear and thoughtful manner, tracing the development of the study of biology along its various branches throughout its history, giving what is practically a comprehensive survey of the evolution of biological science with reference chiefly to the Victorian Era, though its earlier phases are succinctly outlined. In chapters 2 and 3 he deals with the classification of animals and plants in a manner that brings home to the student the true importance of relationship, a knowledge of which is so essential to the proper arrangement of a museum; while in later chapters physiology and morphology are discussed in their true bearings. Embryology, which is a science born of the Darwinian theory, naturally comes in for treatment, as does also Heredity and Geographical distribution. The "Evolution of evolution theory" is the subject of the last chapter, and is one of the most fascinating in an eminently readable and attractive book.

OFFICIAL REPORT OF THE NATURE-STUDY EXHIBITION AND CONFERENCES, held in the Royal Botanical Society's Gardens, Regent's Park, London, July 23rd to August 5th, 1902. London: Blackie and Son, Limited, 1903.

In the *Museums Journal* for August, 1902, p. 63, a short account was given of the Nature-Study Exhibition which has been held in Regent's Park, and we are now very glad to have the full official report published by Messrs. Blackie and Son. This exhibition, as its name implies, was intended to further the direct method of acquiring knowledge by observation and study of natural objects, which were arranged according to the different grades of schools in Britain, the Colonies, and the United States of America. In the Judge's report they state "that a large amount of sound work in 'Nature-study' is now being done in British Schools, but that a good deal of energy is being expended along lines which are not likely to yield the best return." One result of the exhibition would be to correct this waste of energy, while the wide influence it exerted in all directions is shown by the enquiries from all parts of the world for information on the subject. During the time the exhibition was open there were daily conferences, with addresses from our greatest educationalists, and these addresses, together with the valuable report of the Executive Committee, are gathered together in this handy, well-printed volume of 300 pages. "Nature-study" has a very close affinity with museum work, and every curator should carefully read this book, which is rich in suggestive ideas for extending the usefulness and attractiveness of museums.

EYES AND NO EYES, by Arabella B. Buckley (Mrs. Fisher). London: Cassell and Co., Limited.

This book is not a description of the well-known picture by F. Bramley, which bears the same title, but it is a delightful description of what the open eyes of the enquiring juvenile may discern if he rightly uses those organs. The volume is divided into six books, all separately paged, though bound in one cover, and all dealing with out-door life, whether of the woods, the fields, the pond, the river, or the air. There is a simplicity of style with an accuracy of definition that

offers one of the pleasantest paths to a true knowledge of nature that any child could travel, nor will those of older years and larger mental growth fail to derive pleasure and knowledge from a perusal of these pages of easily readable type. It is withal a lesson book, for each of the subsidiary books is divided into a dozen or more lessons, each with a separate heading, and treating of one subject, the whole plan of the book dealing with natural observation, rather than with scientific teaching. Many of these lessons suggest admirable descriptive labels for museums, such as "the man in the street" might easily be expected to understand, and for which he has long been asking. Take, for example, "The Woodpecker's Nest." "His wings were green and so was his breast. He had yellow on his tail. His head was red and he had a red streak on his throat. His beak was long and grey He came hopping along, then stopped, and a long shining tongue came out of his mouth and went back so quickly we could scarcely see it. He is eating ants. The tip of his tongue is sticky and he draws them into his mouth." That is a very recognisable description of a wood-pecker. Then follows an account of his methods of climbing the tree, his discovery of grubs in the bark, the hole admitting to the nest, and so on, giving the whole history from actual observation in a way that everybody can understand. There are numerous coloured plates, as well as figures in the text, that give fuller realisation to the objects described, and also elucidate some of their less conspicuous characters.

Museum Publications.

ANALES DEL MUSEO NACIONAL DE BUENOS AIRES. Tomo vii., 1902.

In the matter of tongues these Annals are quite remarkable, for the papers range through several languages as well as over many topics. Some of the papers are in Latin, some in English, some in French, and most of them in Spanish. To review these adequately wide linguistic attainments are required, so we can only deal with them to the extent of our abilities. After a few remarks on the projects of the new

director, Mr. Florentino Ameghino, who was appointed last year, there is an appreciation and review of the life of the late director, Carlos Berg, who was by birth a Russian of German descent, and who seems to have done a great deal of good work in the land of his adoption. An article on *Carolibergia azulensis*, a new pampean representative of the sub-order *Toxodontia*, by Alcide Mercerat, gives a description of what was at first thought to be a new species of toxodont found on the banks of the river Azul, but subsequent investigation proved it to be a *Toxodon platensis*. This is followed by a paper by Philip P. Calvert, entitled "A contribution to the knowledge of the *Odonata* of Paraguay," giving the results of the examination by this American specialist of specimens sent him by the director of this museum. Each insect is fully described, and two new varieties identified. The "Morphological and statistical observations on the variations of *Digitalis purpurea*, L." by Angel Gallardo, is an exhaustive, and to botanists interesting, study of the anomalies of the foxglove. There is an admirable bibliography annexed. Another botanical paper deals with an arboreal plant belonging to the *Leguminosæ*, found in Argentina by Tedoro Stuckert. This is a complete description of the climbing plant called *Prosopis Vinalillo*. Corrections and annotations to the "Synopsis of the Hemiptera of Chili by Edwyn C. Reed," by Carlos Berg, is a continuation of the labours of a previous investigator. An interesting paper on "Stone Votive Axes" (Pillan Toki), by Juan B. Ambrosetti, deals with the beautifully ornamented axes used in religious ceremonies by the Araucanians in Argentina. The ornamentation is thought to allude to some form of sun worship. The same author also contributes a valuable paper on "Some Ceremonial Vases of the Calchaqui region." Many of these vases are ornamented with figures of serpents and crosses, which it is suggested symbolize the rays of the sun and the rain clouds. "The History of the Oysters of Argentina," by H. von Ihering, is a description of the fossil oysters, of which several new varieties are enumerated. New additions to the flora of Patagonia, by Carolo Spegazzini (Part 3), is a list of the flora, with notes of the different species, and their habitat'

printed in Latin for the universal benefit of science. In the paper on "New Hymenoptera of South America," by C. Schrottky, eight new species are described. The same writer gives a description of the specimens of *Megacilissa*, *Caupolicana*, *Oxæa*, *Epicharis*, *Centris*, *Meliphila*, and *Euglossa* in the collection of Hymenoptera in the National Museum of Buenos Ayres, with valuable notes as to their habitat. The critical notes on the "Birds of Paraguay described by Mr. A. de Winkelreid Bertoni," by Enrique Lynch Arribalzaga, is a review of the work of Mr. Bertoni, with additions and corrections. New species seem to be as thick as the leaves in Vallombrosa. The *Anales* include reports on the museum for 1898 and 1899, giving the number of visitors, a list of additions and donors. There are numerous illustrations in the book, which is well printed, and forms a valuable record of scientific work in South America.

THE CHILIAN REVIEW OF NATURAL HISTORY (the organ of the Valparaiso Museum). Year 6. No. 2. Director and editor, Professor Charles E. Porter.

This journal is issued every two months. "The making of the horsehair of Florencia," by Felix Jaffuel, is a description of a fabric made from the silkworm. "The scientific and vulgar names of the fishes of Chili," by F. T. Delfin, is an interesting record, worthy of imitation, of the names of fishes in common use. "Studies in Chilian ornithology," by F. Albert (continued). This gives the name, description, and habitat of the birds of the country. There is a series of valuable notes on how to deal with the various diseases of the plants cultivated in Chili. A number of scientific notes, a list of additions, and the number of visitors' averages, 715 per month, are given from January to April.

General Notes.

AT HOME.

MAIDSTONE MUSEUM APPOINTMENT.—Mr. J. H. Allchin has been appointed curator and librarian at Maidstone, in place of Mr. F. V. James, F.S.A., who retired last Christmas. Mr. Allchin was for twelve years curator of the Bently Art Gallery, which is an annexe to the museum, though previously under a different governing body. Now the trustees of the Bently Art Gallery and the committee of the museum have combined so far as to appoint Mr. Allchin curator and librarian of the entire institution.

REGISTRATION OF MUSEUM SPECIMENS.—In another part of this issue is published a paper on this subject, to which we desire to draw special attention with a view of inducing curators of museums in general to give us information as to the systems adopted in their respective museums. It will probably be found that there are certain methods of registration common to all museums, though probably the details of the system vary considerably in different museums, and it would be decidedly helpful to all curators to know of any special lines adopted in the numbering and registration of specimens. It will be admitted that this is one of the most important duties devolving upon a curator, for the whole history of the specimens depends chiefly on the system of numbering by which their permanent identity is secured. We shall, therefore, be glad to publish, month by month, the system in vogue in various museums, and we earnestly ask curators to furnish us with the necessary particulars.

LIMERICK.—We learn from *The Irish Naturalist* that it is proposed to establish a Municipal Museum in connection with the Free Library in this city. We fully agree with the remarks of *The Naturalist* that the first requisite for a successful and useful museum is a competent curator, and we hope the Corporation will bear this in mind in allotting the necessary funds.

BOARD OF EDUCATION.—Mr. F. Grant Ogilvie, the director of the Edinburgh Museum of Science and Art, has been appointed a Principal Assistant Secretary of the Board of Education, in charge of a new division, for matters connected with technology and higher education in science and art, which comes into existence on April 1st. Sir William Abney, K.C.B., who retires on that date from the post of Principal Assistant Secretary of the South Kensington branch, will be retained as adviser to the board in matters connected with science.

A JEWISH MUSEUM FOR LONDON.—It has been proposed to establish a Jewish museum in London, similar to those existing at Paris and Vienna. The scheme has been well received among the Jewish community, and it is felt that many of the priceless treasures which exist in the houses of wealthy Hebrews in this country would be willingly lent or even given for the purpose. The advantage of such an institution to the student of ecclesiastical history would be very great. The Jewish Historical Society have the matter in hand and intend taking measures in this direction during the present year.

HONOUR FOR A MUSEUM-WORKER.—Among the names of those who received awards from the council of the Geological Society this year we do not notice that of any regular museum official. Museum work was, however, to some extent represented in the person of Mr. S. S. Buckman (who for the second time received one of the funds) since Mr. Buckman is known for his excellent arrangement of the museum at Cheltenham College (see *Cheltenham Coll. Nat. Hist. Soc. Report*, 1899, pp. 45-55), and has recently been engaged in working out the collections and preparing plans for the museum of the Holmesdale Natural History Club at Reigate. Mr. Buckman's extensive knowledge of Jurassic fossils, notably the cephalopoda and brachiopoda, has caused his employment by the authorities at the British Museum and at the Oxford Museum. He is, in fact, one of those people for whom the members of our Association have constantly been crying out, namely, a specialist, who will undertake to name and arrange certain portions of the collections in local museums.

BRITISH MUSEUM.—The King of Portugal has sent to the Natural History Museum at South Kensington a collection of fishes and deep-sea specimens obtained by him during his cruises off the coast of Portugal. His Majesty is fond of the study of marine biology, and is especially interested in fishes. During his last visit to London, he spent some time in inspecting the unique collection of fishes preserved in the British Museum, and it is in fulfilment of a promise then made that his present gift is bestowed.

SIR E. A. WATERLOW ON ART EXHIBITIONS.—Sir Ernest Waterlow, R.A. (president of the Royal Water-colour Society), opened the Spring Exhibition of Pictures at the Oldham Corporation Art Gallery. Before declaring the exhibition open, Sir Ernest Waterlow said he was glad to have an opportunity of observing for himself their enterprise in the cause of art in Oldham. It was fitting that this happy state of affairs artistic should exist in a town the name of which was borne as a christian name by the distinguished engraver, Thomas Oldham Barlow, whose magnificent portrait by Millais hung in their

permanent collection, and which was borne as a mark of distinction by the late William Stott, better known as "Stott of Oldham." They had also among their local artists Mr. F. W. Jackson, who had strong artistic feeling. He would add a few words on the beneficial influence of exhibitions such as this. In these days of strenuous mental toil, necessitated by the fierce competition prevailing throughout the world, relaxation for our minds was as vitally necessary as relaxation for our bodies. Where this could be gained through the eye or the ear, without unnecessary strain on the observer or listener, he thought the best means of mental relaxation had been found. They all knew the influence of music, but he claimed a still higher influence for the art of painting. He shared with many the belief that such exhibitions as that largely influenced the artistic feeling of the country, and had a far-reaching effect on the numerous trades and businesses depending for their success on form and colour. He could mention many examples of the direct and indirect influences of the art of painting, but he would be content with merely mentioning a growing industry the impulse to which was due to one of the foremost artists of the day. He referred to tapestry and the designs of the late Sir Edward Burne-Jones. He claimed not only that painting was a mental relaxation, but that the influence of such an exhibition as that was borne away by some, at any rate, of the visitors to it and left its impress upon their own work. While he did not wish to decry or to detract from the magnificent creations of the great masters, who brought the art of painting to a high pitch of excellence, he would say that many wretched and often spurious examples of the work of painters of an earlier age which never had any claim to be called masterpieces, and never would have, and which could never have commanded any great price when painted, were yet readily sold at the present day at prices beyond the dreams of avarice—from the modern painter's point of view. If, instead of acquiring so much that was inferior, the work of modern artists were purchased, art would be encouraged and would flourish in many instances where it had been stifled—to his knowledge—by actual want. He wished to say how much artists were encouraged by the awakening of the capital and the principal towns of this country to the importance and the educative influence of exhibitions of paintings. It was, indeed, mainly through such exhibitions that the art of painting was exercising more fully its legitimate influence upon the nation at large.

NATIONAL TREASURES, THEIR DESTRUCTION AND DEFENCE. —The recent acts of vandalism at Hampton Court Palace leave no doubt that the nation's treasures there are insuffi-

ciently safeguarded. To a person of ordinary intelligence, gifted with only slight imagination, the associations which cling about its ancient halls and silent cloisters would be sufficient guarantee of decorous behaviour; but the curators of national heirlooms should be prepared for the attacks of wanton destroyers. The latest instance of this destructive spirit was discovered last month, when a tapestry hanging in the horn room was found to have been slashed, apparently with a knife. This tapestry is one of a series of five, illustrating the story of Dido and Æneas. It is the smallest of the five, being about eight feet by eight feet six inches, and the cut is on the lower part, and about six inches in length. The horn room has only been opened to the public during the last few years. It is the room in which were hung the horns collected by Queen Elizabeth, and supplemented by the successive monarchs, until, in the time of Charles II., it was considered one of the finest collections in the kingdom. This collection was gradually removed, and the chamber became a lumber-room, until these tapestries were placed there, and it was opened to the public. They were brought, it is believed, from St. James's Palace about a quarter of a century ago, and the particular one which has suffered was guarded by a carved oak railing gilded, which was once an altar rail, probably of the period of Charles II. The tapestries in this room, which is quite a small apartment, were Flemish, and although valuable, do not compare with the priceless collection in the great hall. The latter belonged to Cardinal Wolsey, and were of contemporary workmanship, representing the life of Abraham. In the withdrawing room, which adjoins the great hall, and to which the horn room is attached, is another very valuable collection illustrating the "Seven Deadly Sins," and part of a series representing the "Triumph of Virtue." Others of the series are in South Kensington Museum, and another is in the Rheims Cathedral. These are illustrative of the works of Petrarch, the subjects including "Time, Death, and Chastity." There is only one warder to look after the three apartments, and when he is in the great hall it is impossible for him to see what is going on in the other two. It may be remembered that on Dec. 22nd last a picture of William III. in the first presence chamber was found to have been mutilated, the pressure of a thumb having apparently caused a tear in the canvas. Next day a picture of Henry VIII., hanging in the Queen's audience chamber, was discovered to have been damaged. The face had been extensively scratched with a pencil, but it has, fortunately, done little permanent injury. As a result of these outrages, some of the apartments, including the horn room, have been closed to the public.

BRITISH MUSEUM.—Dr. C. W. Andrews, of the Geological Department, who has already made such successful explorations in the Fayum, has again proceeded thither, together with the officers of the Geological Survey of Egypt, and will doubtless form further collections of the interesting Eocene vertebrate remains. Mr. W. R. Ogilvie Grant, of the bird room in this museum, is absent for a few months on a collecting expedition to the Azores.

LOST ANTIQUITIES RECOVERED.—A year or more ago Dr. Murray, of the British Museum, received from a clergyman a copy of a Greek inscription on a piece of marble in a rockery in Essex. It turned out to be an inscription which had been missing since about 1771, in which year it was published in the "Archæologia of the Society of Antiquaries." The story was that Stuart, when in Athens preparing the drawings for his famous book, had picked up this inscribed piece of marble, and given it with some fragments of bas-reliefs to a ship captain to take to Smyrna, where he intended to get it on his way home. When, however, Stuart next saw the marble it was in the hands of a Mr. Jones, of Finchley, who had received the inscription and the fragments of bas-reliefs from a Captain in the Navy. How long the inscription remained at Finchley is not known, but just about then there was a well-known antiquary, Thomas Astle, much interested in ancient alphabets, and presumably the sort of person who would like to possess the beautifully-inscribed stone. At all events, it was on an estate in Essex, once belonging to Thomas Astle, that the inscription had lately been recognised. The inscription is of no little historical interest, being part of a monument erected in Athens in honour of volunteers from Cleonæ who had fought on the side of the Athenians (457 B.C.) in the battle of Tanagra against the Lacedæmonians and Eubœans. Some additional fragments have since been picked up in Athens. When the copy was sent to Dr. Murray he noted that an important part of the inscription was still missing. Since then, however, a son of the present owner of the estate had found that part in digging round the rockery. Both pieces have now been moved into the house. The larger piece has a bleached appearance from long exposure to Essex weather, but the fragment lately dug up looks as if it might have been brought from Athens the other day. As if this were not enough, the gardener at the same home had found, two or three months ago, in digging beside the old rockery, what has turned out to be a fragment of the Parthenon frieze. It was first identified as such by a young medical student, Mr. Alıston Glover, who had visited Athens and was familiar with the style of the sculpture. Dr. Murray was inclined to think that

this fragment of the frieze had reached Essex along with the Greek inscription, and had been sent home with it by Stuart. Thos. Astle was in his time a trustee of the British Museum. But that, Dr. Murray said, was in the pre-Elgin days, when the Towneley marbles were regarded by dilettanti as the perfection of ancient sculpture. A fragment of the Parthenon frieze would have counted for very little then.

A MUSEUM FOR LUCK.—In Oakham, Rutlandshire, is an old castle which possesses a museum of gilded horseshoes, to which every peer of the realm who passes through the town is expected to contribute. Recent donors are the Duke of Sutherland and Lord Hamilton of Dalzell. Both the King and Queen have contributed similar relics as souvenirs of their interest in the place.

PHOTOGRAPHIC RECORD.—The National Photographic Record Association continues to make steady progress in its work of collecting prints for the British Museum. During the last twelve months 593 photographs have been received. The series includes views of St. James's Palace, Sandringham Hall, Frogmore, Hatfield House, and several other historic mansions, prints of the Tynwald day ceremonies of the Isle of Man, contributed by Sir Benjamin Stone, and 60 prints from Mr. Diveris' valuable Scottish collection, including views of the Royal Palace, Linlithgow, Castle of the Boyne, Craigmillar, and Ballindalloch Castle, and some of the old incised stones. A valuable photographic record of the Coronation ceremonies, also the work of Sir B. Stone, has been obtained by the Association. The series consists of about 300 photographs, and it includes not only the street pageant attending the Coronation, but also the representation of the erections, such as the annexe to Westminster Abbey, the appearance within the Abbey, the Coronation chairs of the King and Queen, the appearance of the altar, the decoration of the streets on every part of the route, as well as the Royal progress through the city, the detachments of colonial soldiers, the Royal guests, and many portraits of eminent men and women who were in London at the time of the Coronation. The prints, after being collected by the Association from all parts of the kingdom, are mounnted and sent to the Print Room of the British Museum, where they will be for ever available for public reference.

THE ROYAL ARCHITECTURAL MUSEUM, LONDON.—A special meeting of the Architectural Association has been held to discuss, amongst other matters, the question of taking over the buildings now occupied by the Royal Architectural Museum and Westminster School of Art in Tufton-street, Westminster. The chair was occupied by the president, Mr.

H. T. Hare, who, in his opening speech dealt with the inadequacy of their premises and the financial struggles they had experienced. The proposal that they should now take over the buildings occupied by the Royal Architectural Museum in Tufton-street was an excellent one. The premises consisted of a large central hall surrounded by galleries containing an immense and unique collection of casts, the value of which it was impossible to estimate, but which probably amounted to many thousands of pounds, together with eight large studios and office accommodation. The only condition was that they should pay an estimated deficit of £700 and that the museum should be maintained and be accessible to the public as heretofore. The buildings were held on two leases from the Ecclesiastical Commissioners, one of which expires at Michaelmas, 1926, and the other at Christmas, 1976, at a total of £140 per annum, the rates and taxes being £17 in addition, and they could go into possession in March next. A special committee, appointed to consider the matter, strongly advocated the acceptance of the offer. The committee also suggested that they should undertake, with the consent of the King, to retain the description of the Royal Architectural Museum. The scheme was heartily supported by various speakers, and the proposal carried unanimously. It was in this museum that Ruskin, Beresford Hope, and other leaders of the Gothic revival in the sixties, used to lecture to a small but enthusiastic band of followers; and although its little collection of architectural treasures is not nearly so valuable as that at South Kensington, it contains specimens of considerable technical interest to the student. Since it became the headquarters of the Westminster school of art, however, it has lost most of its original significance; and it is doubtful if the students themselves know that the quaint little hall in the precincts of the Abbey once played its part in the war against classicism.

MANSFIELD'S MUSEUM.—The collection of natural history specimens, educational models, and scientific apparatus, which Mr. Edward Baily has given to Mansfield, Notts, as a nucleus for a museum for his native town, and which has taken him over 20 years to get together, is an extremely valuable one. The contents of the museum include the following:—Animals, 87; reptiles, 20; fish (sea) preserved, 70; fish (fresh water) preserved, 35; fish cast (plaster of paris), 180; birds (stuffed), 1,420; birds (in skin), 520; birds' nests, 82; birds' eggs, 2,050; butterflies and moths, British and foreign, 30,000; crustacea, 270; corals, 20; British and foreign shells, collection of plants, and anatomical specimens. There are also cases containing technical instruction models and numerous examples of manufacture and a fine collection of scientific

instruments. Mr. Baily resided for many years at Westgate, Mansfield, after which he removed to Penzance, whence he has just gone to Worthing, in Sussex.

NORWICH MUSEUM.—The city of Norwich possesses a valuable museum, very well arranged, and most happily stored in the Castle. The pride of the collection is the Natural History Gallery; but there is also a small but interesting set of paintings in oil and water colours by artists mainly of the Norfolk School, which includes specimens, well worthy of study, by Crome, John Sell Cotman, and J. J. Cotman, the Rev. E. T. Daniell (one of the pioneers of etching in England), Henry Bright, John Thirtle, James Stark, Henry Ninham, and others. There is also a large collection of water-colours (with many of his own works) presented by the late J. W. Walker. Among Norfolk men, however, that fine etcher, Mr. C. J Watson, is very inadequately represented, and one looks in vain for a set of examples of the school of lithography which flourished in the locality for years before the late "boom" was heard of. Norwich should follow the example of Hamburg, and carefully amass specimens of the works of all its artists. Few cities have material of the kind for making so good a show as this would prove. The penny catalogue is well done, and is a thing to be thankful for.

GLOUCESTER MUSEUM.—Alderman Sessions of Gloucester, has recently contributed to a local paper a valuable series of articles on the need of a museum for Gloucester. Since the old habitat of the museum was appropriated to other purposes in order to give the necessary floor-space for the public library, the city has been practically without a public collection of objects of interest, educational or otherwise. The collection was huddled pell-mell into an upper chamber of the Municipal Schools, very much as the old pictures that formerly adorned the Tolsey were consigned to a lumber room in the new Guildhall, and irreparable damage was done in the course of the removal. The museum is now in process of re-organisation, a portion of the Price Memorial Hall having been allotted for the purpose, and Alderman Sessions has eloquently and forcibly pleaded that this work should be carried out on approved scientific and educational lines, with Ruskin's ideal ever to the fore: "The Museum is to manifest to simple persons the beauty and life of all things and creatures in their perfectness . . . not their modes of corruption, disease, and death." Mr. Sessions' series of articles has been brimful of sound advice and practical suggestions, and it will be no fault of his if public interest is not stimulated and an opinion formed which shall encourage the committee to accept the lead which he is prepared to give. Gloucester certainly ought to possess a museum

worthy of the city and shire and their natural and historical treasures, and to link such an institution with the different educational institutions of the city and county would obviously eventuate in a great gain both to the schools and to the museum. Such a store-house, replete with every specimen of scientific interest and value, can only be created in course of time. "But," as he well urges, "now that we are starting *de novo* is the time, if ever, to impress our citizens with the continuing ideal of what our museum ought to be and may be."

ART LECTURES.—Count Plunkett, F.S.A., recently gave a lecture before the Dante Society, London, on "Pinelli," an illustrator of the "Divina Commedia." The lecturer dealt in detail with the life and works of the impetuous yet scholarly artist, who was born in Rome in 1781 and died there in 1835. Showing Pinelli's inferiority in subtlety and emotion to the early masters in their dealings with Dante's text, Count Plunkett proved Pinelli to be one of the most virile and impressive artists of the modern school. The lecture was very fully illustrated with slides from Pinelli's etched plates and from original drawings in the lecturer's possession. On the 29th of January Count Plunkett also lectured on "Verrocchio," within view of the models of the "Colleone" and "Cupid with a Dolphin," in the Dublin Museum of Science and Art; and gave, at the end of February, two illustrated lectures on Printing (Typography) in the Dublin Municipal Public Libraries, for the Arts and Crafts Society of Ireland. Count Plunkett has returned to his work in connection with the coming Cork International Exhibition, which will be opened in June.

OXFORD MUSEUMS.—The reports of the keepers of the Ashmolean Museum and Oxford University Galleries for 1902 show continued and valuable activity on the part of the small staff concerned. The number of visitors to the museum was 14,855. The new Ashmolean lecture-room and the Slade professor's studio as well as the annexe to the picture galleries were completed during the past year, while important accessions of Egyptian and Greek antiquities were received. The keeper, Mr. Arthur J. Evans, M.A., has commenced a "General Handbook" to the Ashmolean collections, which will be a most valuable publication. An interesting detail of the work of the year has been the rearrangement of the Oxford Mediæval Room, in connection with which it is worth noting that the purchase of Mr. C. L. Stainer's collection brings the set of Oxford city tradesmen's tokens to within measurable distance of completion, only twenty-one known types being wanting. No additions of importance seem to have been made to the picture galleries; but Mr. T. W. Jackson has

presented to the art library a valuable set of over two hundred and seventy volumes, including many useful works of reference and series of reproductions.

NEWCASTLE MUSEUM.—The Natural History Society of Northumberland and Durham has been presented by Colonel Adamson with his unique and well-known collection of Burmese lepidoptera. This collection, the fruit of thirty years' collecting in Burmah, contains a number of type specimens which will now be carefully preserved in the Hancock Museum at Newcastle.

BRITISH MUSEUM TRUSTEES.— The King has appointed Sir Mountstuart Grant-Duff Royal Trustee of the British Museum in place of the Archbishop of Canterbury, who, as Primate, is now one of the principal trustees of the Museum. The former's accession to the board will be welcomed at both branches of the museum, for, as a geographer and past president of the Royal Geographical Society, he will have a special personal interest in the sub-department of maps at Bloomsbury, while the study of natural history has always had an attraction for him. As regards Sir Richard Jebb, M.P., who was also made a trustee of the British Museum by the vote of the electing trustees, it is understood that it was on the nomination of the Prime Minister that he was elected to the office, in the room of the late Lord Acton. He may be expected to be specially useful in regard to the literary and antiquarian side of the work of the museum.

ABROAD.

NEW MUSEUM FOR DURBAN, SOUTH AFRICA.—A preliminary competition of sketch designs has been invited for a town hall, library, museum, art gallery, and public offices at Durban.

PARIS MUSEUM OF NATURAL HISTORY.—This museum has received a gift of twenty thousand butterflies and moths from M. E. Boullet.

CARNAVALET MUSEUM, PARIS.—This museum has been enriched by new gifts. The painter Houdron has offered two small pictures of considerable historical and artistic interest, one representing the Pavilion of Hanover, the other the astrological tower of Catherine de Médicis. From M. Victor Klotz the museum has received some quaint aquatints of the eighteenth century, representing aerostatic experiments, and an anonymous donor has given a dainty Nattier—the portrait of Madame de Mailly as Hebe.

EMPEROR FREDERICK MUSEUM, BERLIN. The Emperor William has presented the statue of Venus, by Pigalle, hitherto among the artistic treasures at the royal residence at Sans Souci, to the committee of the Emperor Frederick Museum, which is shortly to be opened at Berlin.

CARNEGIE MUSEUM.—Dr. A. E. Ortmann, of Princeton University, has been appointed curator of invertebrate zoology in this museum.

ROCKEFELLER INSTITUTE.—The institute for medical research founded by Mr. John D. Rockefeller in New York will include, besides a hospital and research laboratory, a museum of hygiene. It is expected that the buildings will be on the east side of the city near Eightieth street.

AMERICAN MUSEUM OF NATURAL HISTORY.—Dr. E. O. Hovey has again gone to the Lesser Antilles to study the changes that have taken place in consequence of the later eruptions in Martinique and St. Vincent, to examine the other volcanic islands of the chain, and to make collections for the museum.

HARVARD UNIVERSITY.—The Germanic Museum of Harvard University was recently opened, and Imperial assistance is to be given to it by the German Emperor, who is presenting an important series of casts, some of them being of very large size. Professor Kuno Francke takes charge of the institution as curator, and the exhibits already secured were for the most part chosen and purchased by him in Germany last summer. Among the casts are the font and choir screen, as well as casts of the great bronze door from the cathedral of Hildesheim.

Correspondence.

To the Editor of *The Museums Journal.*

Sir,—The instructive notes in the November number of the *Museums Journal*, by Dr. Bather. on "The Labels in Public Galleries," should be very welcome to museum curators, and most of the latter will probably sympathise with his views. But, as he aptly remarks, difficulties will arise when one attempts to carry out the idea of using English names on museum labels.

One of my predecessors also had conceived the idea of translating all the Latin names into English, with dire results; but although most of these have now been deleted, all good English names have been retained as far as possible. The difficulties we are confronted with are perhaps more apparent in the fishes than in any other group, as the same species frequently has a different name on various parts of the coast. How are we to decide which of the many English names is the correct one? Then we are informed that the English name for such a fish as *Torpedo nobiliana* is "Electric Ray" or "Torped -fish." Would any English fisherman recognise the species under that name? Here, in Dublin Bay, the fishermen call it "Numb Ray," which seems to me such an expressive name, and one which fishermen would more likely use than the other, that I have adopted it in the Dublin Museum. Many similar cases might be quoted. I have lists of nearly a dozen local names used for the same species of fish round the Irish Coast. Many of these, however, are Irish names or Anglicized Irish ones. If a good English name were used in the museum for some of these, none of the fishermen or the general public would recognise the fish under the name adopted. On the other hand, we should have to face the extreme difficulty in deciding which of the many Irish names is the best local name to use.

R. F. SCHARFF.

National Museum, Dublin.

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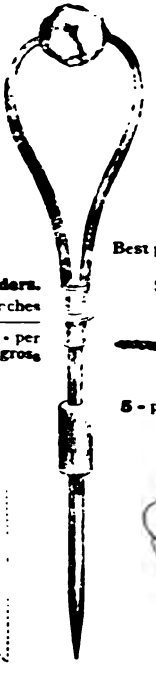

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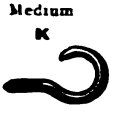

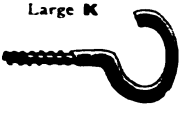

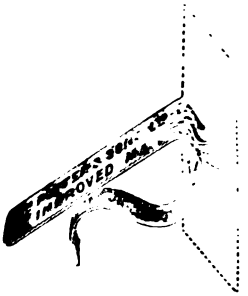

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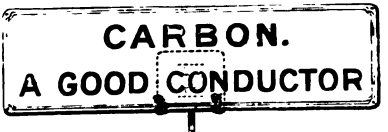

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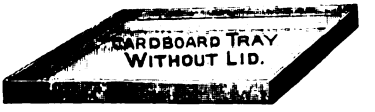

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THE MUSEUMS JOURNAL.

Vol. 2. *April, 1903.* *No. 10.*

Lectures in Museums.

A SOMEWHAT lively little discussion recently took place in the *Daily Chronicle* about this subject, so familiar to all our readers. Dr. Andrew Wilson opened the game by a statement that in the great London museums, especially the Natural History Museum, "little effort was made to give instruction to the public concerning the objects they contained." He implied that the museum was kept as "a close preserve for specialists." It was indeed true that the members of the Royal Microscopical Society were to make two visits to this museum under the guidance of Dr. Henry Woodward and Mr. W. Carruthers; but Dr. Wilson wished to see lectures given, presumably by members of the staff, to that "larger body of people eager for knowledge" but unable to claim the privileges accorded to a learned society. These remarks, which seemed to show that Dr. Wilson had not a very extensive acquaintance with the Natural History Museum, brought out the fact that the officials of that institution really do a great deal in the way of taking parties round. Indeed on the Saturday after Dr. Wilson's criticisms appeared there were no less than three different parties being taken round the museum by different members of the staff, and two of those parties could certainly not be described as composed of the members of learned societies.

Further than this we were glad to see it recognised by many of the correspondents, themselves unconnected with museums, that the real business of the museum-curator is not to give occasional instruction by peripatetic lectures to a necessarily limited number of people, but, in the words of Mr. A. Morley Davies, "to provide continual instruction by

specially arranged collections, with full and clear printed explanations understandable by those utterly ignorant of science."

A lecture may be a good thing and a museum may be a a good thing, but a museum-lecture is exceedingly unsatisfactory. Museum galleries are not, and cannot be, built to suit public speaking, nor can specimens be displayed in such a way that any large number of people can see them at the same time. Moreover, in the Natural History Museum, the passage of a personally-conducted party is always more or less of a nuisance to the solitary student, who has perhaps come up from the country or looked in on his way home from his city office to get an hour's quiet study of some particular specimens.

Were public lectures by members of the staff to become a recognised system at our great museums, the staff would have to be very considerably increased by the addition of members selected for oratorical rather than curatorial gifts, while much heart-burning would be caused by the difficulty of selecting a sufficiently small number of visitors from among the "larger body of people eager for knowledge." No! Professor Haddon seems to us to hit the nail on the head when he points out that teachers or other people of moderate intelligence can easily get up a subject by a preliminary study of the excellent labels that are nowadays provided in our larger museums, and can then impart that knowledge to those who are unable to receive any other than oral instruction.

New Art Galleries for Manchester.

By Professor W. Boyd-Dawkins, M.A., D.Sc., F.R.S.

[Reprinted from *The Manchester Guardian*.]

IN the lives of cities, as in the lives of men, opportunities arise, never to recur again, that leave their impress on the whole of the future. Such an opportunity now lies within the reach of the civic rulers of Manchester if they rise to the level of local patriotism necessary for them to grasp it. They

are now possessed of powers never before in municipal hands, and have to undertake new responsibilities which demand the highest qualities of citizenship. We are confident that they will act, so far as in them lies, for the best interests of the future of this city.

A great movement is going on here and in the nation at large in the direction of raising the ideal of life. We are becoming awake to the necessity of placing the highest culture within the reach of everyone. We have already exchanged academical isolation from affairs for a vigorous attempt to bring university training into line with the utilitarian needs of modern life. It is now fully recognised that if our commercial position is to be maintained and enlarged, the training of the middle and lower classes must be improved to an equal or greater extent than is already the case with our successful rivals, both American and German. We must have the best possible appliances for teaching. We must teach, as far as may be, from the things themselves, as well as from books, if we are to hold our own under the ever-changing conditions of the life-struggle. To stand still means failure.

Manchester has taken a foremost place in this general movement. The Owens College grew into the Victoria University—the first of the new type of universities—and has done incalculable service in raising the standard of education in Lancashire and Yorkshire. Now that it is more closely linked with Manchester it will be far more efficient in the future than it has ever been in the past. Nor is Manchester less happy in having the machinery for teaching natural history fully equipped and in full work. The Manchester Museum, reorganised and maintained mainly by Owens College, with a subsidy from the Corporation, is arranged so as to form a kind of reference library open to all comers who wish to study the history of the earth and of plants and animals, first hand, from the things themselves. It is second only to the Natural History Museum at South Kensington in scope and efficiency. and is being used by ever-increasing numbers both of students and of the general public.

When Professor Huxley gave a public address in Manchester some twenty years ago on technical education, he said,

that there was not much to be learned about it in England, and that Manchester was the best place for a new departure to be made. Now, thanks to the public spirit of the Corporation, backed up by the citizens, the new departure has been made in the founding of a school of technology equipped with all the newest appliances, and with a staff of able teachers, so as to cover the enormous field presented by the application of the sciences to the mechanical arts and manufactures. In the possession of these three institutions Manchester is singularly fortunate. Between them the higher education is provided for, the study of nature is open to all, and the technical arts are being taught as they never were before.

Beyond these, however, there remains an important and hitherto hardly noticed branch of culture that can no longer be ignored without great injury to the community. The study of art as illustrated in the art galleries is confined mainly to its applications to painting and sculpture, and has ltttle or no influence on the people. The applications of art to objects of daily use—to stone, metals, wood, pottery, glass, and the various fabrics—are mostly excluded, or, if they are admitted, are useless for systematic study either through their small numbers or their bad arrangements. The workers in those materials look in vain in our city for any standards by which they can test the artistic value of their work, and from which they can learn how to combine beauty of form and colour with modern needs. Art is practically separated from handicrafts, and for the workers in Manchester and all over England the best work done by the best men is practically a closed book. Hence arise the poverty of modern design and the inartistic monotony of our streets, houses, furniture and surroundings generally. The effort of Mr. Horsfall to lessen this evil in our midst by the establishment of the Ancoats Museum has met a measure of success which is an incentive to further effort. The Municipal School of Art is also an effort in the same direction. It is, however, too far from the centre of the city, and has its collections too much on the lines of South Kensington Museum to influence the general public. Neither can do more than touch the fringe of the great problem how to raise the standard of taste among the people from the abyss, into which it was

thrown by the destruction of the best work in churches, abbeys, and all other ecclesiastical centres throughout the land, at the time of the Reformation. The problem can be solved by the establishment of art galleries, using the term in the widest and most liberal sense, for the exhibition of the best work of the past, not merely pictures and sculpture, but also the applications of art in other directions. Such an institution in a central position would be of the greatest service to all classes, and would have a profound influence on our manufactures. It is absolutely necessary for the higher education of the students in the art and technical schools. Without it we cannot hope to raise the art of the people to a higher level.

There is another public want daily becoming more urgent—the establishment of a commercial museum to meet the needs of our ever-changing commerce. Without this no scheme of public galleries in Manchester can be complete.

Nor is the best possible site wanting for carrying out such a scheme. The removal of the Infirmary in the near future will place in the hands of the Corporation the best site in Manchester, which in the nature of things must be occupied by noble municipal buildings. It offers an unrivalled opportunity of establishing in one central spot the Free Library, enlarged galleries of art, and a commercial museum, and at the same time of filling the only blank in the field of education in Manchester.

It may be objected that a large central institution of this kind would cost a large sum. The answer is obvious—that Manchester can do what Liverpool, Birmingham, Glasgow, and the chief cities in America and Germany have done.

We shall now consider a plan for the organisation and enlargement of the art galleries, leaving the difficult question of the museum of commerce to be dealt with by other and more competent hands.

It may be assumed that our need in Manchester of institutions for teaching from the things themselves is practically that of London. There the galleries of the British Museum grew round the great library, and it was found necessary to establish sections of Greek, Roman, Assyrian, and Egyptian

art, and at a later time, under Sir Augustus Franks, new galleries to include ethnology, prehistoric and mediæval antiquities. The natural history collections also grew out of the library, and were transferred to their present site in Cromwell Road, Kensington, because there was no space for development in Bloomsbury. The collection and exhibition of pictures, outside the scope of the British Museum, was left to the National Gallery and other institutions which have been founded since. It was, however, fully realised in 1851 that these institutions did not satisfy all the wants of the people. To meet these the Museum of Science and Art was founded at South Kensington and grew into its present position. It is a vast storehouse of valuable artistic and commercial materials still awaiting arrangement. We cannot, obviously, have in Manchester galleries like those in London. We can only select from them what appears to be best suited to our local needs. Natural history, prehistoric archæology, and to some extent ethnology are already looked after in the Manchester Museum, Owens College. The place taken by the National Gallery in London is filled here by our Art Gallery, and certain sections of the British and South Kensington Museums suggest the best lines for the organisation of galleries in a new central institution.

The institution should, in addition to the library and the commercial museum, provide galleries for the exhibition of collections arranged as follows :—

I. Egyptian and Assyrian Section :—There are in Manchester valuable Egyptian collections which would probably be available, and they might be supplemented by the results of the discoveries now being made. In place of originals there is no diffiulty in obtaining casts.

II. Mycenæan, Greek, and Roman Section :—The explorations begun by Schliemann in Troy and culminating in Evans's work at Cnossus in Crete have revealed the existence of a high civilisation in the eastern Mediterranean ranging backwards from the twelfth century to at least the twenty-fifth century, B.C. Its influence was felt westwards to Italy and beyond It was indigenous in that region, and is quite separate from that of Egypt, although there is clear proof that

an intercourse existed between Egypt and Crete as far back as 2500 B.C., as well as in the earlier half of the fifteenth century. It is from the Mycenæan art that the Greeks got their inspiration. The scenes illustrating the hunting and taming of the great wild ox—the urus—done in *repoussée* on two golden cups found in a Mycenæan tomb in Sparta, and the well-modelled bulls and human figures in relief on the walls of the palace at Cnossus and the pose of the ivory statuette found there, indicate beyond all doubt the source of the highest types of Greek art. For the study of this a Mycenæan collection is indispensable. That such a collection comes within the scope of an art gallery is proved by the series from Crete now on show at the winter exhibition of the Royal Academy. It falls naturally into its place next to the Greek and Roman groups. These two sections are of equal value to students of art and of history, and cannot fail to instruct the people at large.

III. The third or Oriental Section is intended mainly to illustrate the sources from which so many designs used in the West have been derived. It should include Corean, Japanese, Chinese, Siamese, and Burmese art, as well as that of India and Persia. We have still much to learn from the East, and more particularly from Japan. It is good for us to have such a section as this in Manchester, simply from the point of view of art. It is necessary when we consider the drift of events by which our intercourse with China and Japan is becoming closer than it ever has been. The only difficulty to be anticipated in organising this section will lie in the exclusion of objects which should have no place in it. If ethnology be allowed a foothold it will be as the letting in of water.

IV. The Western or Occidental Section constitutes the last of the four main groups. It should be confined to mediæval and modern art—to painting and the applications of art to stone, metal, wood, pottery, glass, and fabrics, comprising under each head examples of the best work that can be obtained. This section has its appropriate centre in the art gallery, and the other sub-sections fall naturally into line with it. With the warning of South Kensington before our eyes it will be our own fault if we allow it to become a bazaar.

It will, of course, in common with the rest of the galleries, be so arranged as to be an open book to those who care to read.

This scheme cannot be carried out in all its parts at once. It needs time for growth. The Infirmary site will probably not be available for eight or ten years. If we are wise we shall decide definitely what we want now, and have our scheme ready for the architects so as to make sure that the building be adapted to the purposes for which it is to be used. No time, also, should be lost in making and arranging collections to go into the new galleries.

A great central institution on these lines will cover a field of work that is not touched by any of our present institutions. It is an open secret that the Corporation are prepared to take up the question. If they deal with it on broad and liberal lines such as the above they will earn the gratitude of al future citizens of Manchester by founding a new type of institution which will probably be copied by other communities. In dealing with it they will need the support of the public. This will certainly be given with the same readiness as in the founding of the School of Technology.

Museum "Fakes."

WITHIN the past month there has been considerable excitement amongst private and public collectors respecting the genuineness of works of art, in consequence of the doubt thrown on an important purchase made by the authorities of the Louvre a few years ago of a supposed "tiara" of King Saïtapharnes. The facts not in dispute are few and simple. The so-called tiara is a helmet-shaped crown of gold, elaborately adorned with groups of Homeric figures between two deep bands of richly foliated ornament. It purports to be an example of the somewhat debased Greek art of the third century before Christ, and bears a dedication from the Senate and people of Olbia, a Greek colony in the Chersonese, to "the great and invincible King Saïtapharnes." It was offered for sale in 1896 by a South Russian dealer, who

said that it was found on the site of Olbia, near the modern town of Kertch. After being declined by several museums and private collectors, it was bought by the Louvre, together with one or two smaller pieces, for £8,000. Its authenticity was questioned from the first by scholars of repute like Professor Furtwängler, of Munich, and Dr. Murray, of the British Museum; but it was as stoutly defended by other German and English scholars, and by such eminent French archæologists as M. Salomon Reinach. The question had long been abandoned as insoluble when, last month, a Parisian artist named Elina, who had been arrested on a charge of forging pictures, declared that he had made the famous tiara. This confession caused much excitement in Paris. The Louvre authorities withdrew the tiara from exhibition, and the Government appointed a special commissioner, M. Clermont Ganneau, to inquire into its history. M. Elina, the author of all the commotion, then admitted that he had invented the whole story, and that he falsely claimed the credit of making the tiara in order to draw public attention to his theory that the Louvre contains a few sham antiques. But, as is often the case, one wild statement is no sooner disposed of than another takes its place, and a second claimant to the authorship of the tiara has appeared. A gold engraver of Odessa, named Rachumovski, affirms most positively that he made the "tiara of Saïtapharnes" in 1896 to the order of a person from Kertch. A friend of his, now a jeweller in Paris, declares that he often saw Rachumovski at work on the crown, and that the engraver had no intention of passing it off as an antique. Another friend bears similar testimony, though it is, one must confess, hard to believe that an honest man would take such pains to simulate the style and methods of Hellenistic metal-work. But there is one very awkward fact yet to be reconciled with these assertions. The engraver Rachumovski was accused six years ago of having fabricated the tiara, and wrote to the *Débats* of October 3, 1897, formally denying that he had had anything to do with it.

Besides M. Elina, *alias* Mayence, the Montmartre artist and ornamental sculptor, who claimed to have made or faked the tiara of the old Scythian monarch, another person came to

the front with a strange story. He is a Russian living in Paris, M. Lifschitz, who wrote to the papers to say that the tiara was fabricated at Odessa between 1895 and 1896 by his friend and fellow-countryman, M. Rachumovski. The latter received an order for the tiara, which he worked up from drawings, and notably from the plates in a Greek book given to him by the person who wanted the article. Afterwards Rachumovski heard that the tiara was for the Louvre, but he had no idea that it was to be foisted on the public as a genuine antique. M. Lifschitz says that he and his wife, on coming to Paris, identified the tiara at the Louvre. M. Rachumovski has accordingly been brought over to Paris, his expenses being defrayed by the Ministry of Public Instruction.

Before Rachumovski came to Paris, M. Clermont Ganneau found in the tiara of Saïtaphernes evidence of its being a vamped-up curiosity. Of the three zones of which it is formed, one, he states in his report, is utterly false. The second contains a fragment that is not spurious, with which all the rest of the same zone of the tiara is made to harmonise, whilst the third zone is of the designer's invention. The information given by Rachumovski confirms fully the opinion formed by M. Clermont Ganneau from a critical study of the tiara. Rachumovski gave his explanations before he saw the tiara, at first with hesitation; but as his recollection of details became clearer, gave his information freely, and quite accurately. He is utterly illiterate, knows nothing of styles, and could not tell the name of a book containing the engravings which he had been instructed by the curiosity dealer for whom he worked to bring into the tiara. His description of the engravings enabled M. Clermont Ganneau to obtain a copy of this work. In placing it before Rachumovski he asked him to find the engravings that had guided him. The Russian goldsmith, without any hesitation, opened the parts of the volume where they were to be found. He also worked on a blank plate of gold that M. Clermont Ganneau gave him, and under the eye of the latter copied one of the engravings. The tools he used were those obtained at his house by the French Consul at Odessa, who sent them on

to Paris in a sealed box. Rachumovski has great skill, but lacks ideas, and has no knowledge whatever of antiquity. He blends badly one subject with another. The groups of figures might be culled here and there from a child's picture book, and the sheep he brings into a band separating the zones are of a modern breed.

This grave artistic scandal has naturally given rise to accusations of other forgeries, or spurious imitations in public collections, which must disturb the minds of all those responsible for their selection and exhibition.

M. Elina, whose veracity is evidently not beyond doubt, also alleges that many of the objects acquired by the Carnavalet Museum are forgeries. Nor does he hesitate to add that the wondrous paintings of the Spitzer collection in the Louvre are fraudulent. M. Kaempfen indignantly denies that experts could be so grossly deceived; but search warrants issued corroborate the general charge of "faking" ancient and modern masters, chiefly for rich American purchasers who are not skilled in artistic perception. In art circles there is an outcry for the revision of the catalogue of the Louvre. Paintings supposed to be by Haas, Prud'hon, Fragonard, and Greuze, and purchased for immense sums, are, it is asserted, by imitators whose names are known. It is hinted that these transactions have been carried on by intermediaries who have obtained extravagant commissions.

As there remain some 3,000,000 francs worth of the Spitzer property to be sold, it is probable that the charges of fraud made by M. Elina and others will lead to litigation. There can be no doubt that much remains to be said on the other side. The much talked of tiara did not figure in the catalogue of the Spitzer sale. According to M. Elina it was offered to the British Museum, but was declared a fraud by the experts. He adds that when Baron Alphonse de Rothschild sent a special mission to the Upper Crimea and Nubia several frauds were perpetrated. Wooden sarcophagi exactly resembling those of Egypt were manufactured at Montrouge and sent out to be "authenticated." The trick was accidentally discovered by the officers of the Paris Octroi and communicated to Baron

Rothschild. The trade in mummies is confirmed by several witnesses. A skeleton is obtained, the first process being to swathe it round with bandages steeped in a preparation of Burgundy pitch and resin, with dry spices and dust. The parcel is then sent to Egypt to be "naturalised," and returned in a pseudo-sarcophagus covered with hieroglyphics. Doubts are now raised over the mummies of the courtesan Thaïs and the priest Spiridion, which formed recently one of the sensational sights of Paris.

M. Elina, interviewed by the "Temps," declared that the famous piano of Marie Antoinette, sold to the German Empress, was made some years ago in a workshop in the Notre Dame de Lorette quarter. As for the pictures by Velasquez and Murillo in the Caze collection at the Louvre, they were painted by Senor Escoussoura, a Spanish artist.

A Press correspondent obtained the following statement concerning the Tiara from Dr. A. Stuart Murray, keeper of Greek and Roman Antiquities at the British Museum, Bloomsbury :—

"At the beginning of the year in which the Louvre purchased the pretented Saïtapharnes tiara, I received a letter from a M. Hochmann, of Obbia, in Southern Russia. In this letter he offered me the tiara, and asked me for an appointment in London. I replied that, as I was aware he interested himself considerably in the manufacture of ancient objects of art, the affair did not in any way interest me. The following year the same individual came to London and offered me several objects of art in gold. All were spurious; but the Russian merchant was, nevertheless, able to sell some of his goods to a private firm, who purchased them in quite good faith, and re-sold them to Mr. Pierpont Morgan."

Dr. Murray continuing, said he did not believe M. Elina's statement that he was the author of the tiara It was offered to him from Southern Russia. Personally, he and several of his colleagues at the British Museum were convinced that the work was spurious; but at the same time three of the most competent English authorities on Egyptian and Greek antiquities held a contrary opinion. His own idea was that the floral decorated band of the upper part of the tiara was authentic, but that the rest had been manufactured by ingenious Russian artists. Dr. Murray added that it was regrettable that the tiara should have got into the Louvre

Museum, as forgeries were more rare in it than in any other of the world's museums. As to M. Elina's assertions concerning the manufacture of mummies, Dr. Murray said that these assertions were quite fantastical.

A singular story of another fraud perpetrated on one of the French national museums, has come to light. Some time ago an apprentice in the service of an Orleans wood-carver, named Caillot, came to Paris and paid a visit to the Musée De Cluny, and was astonished to find in it a choir stall which had been made by Caillot. He reported his discovery to Caillot, who also visited the museum, and had great difficulty in convincing the museum authorities that he was not a practical joker. At last they allowed him to take the stall to pieces. He then showed them his own name and the date on which he had sold the stall carved inside. The dealer in antiquities, who bought the article from Caillot, paid £24 for it, and left it for some time in the vestibule of an old family house in the Faubourg St. Germain, the dealer having bribed the house porter for that purpose. The stall was then represented as having belonged to the family for several generations, and the museum authorities paid £360 for it. When the real history of the stall was discovered, the dealer refunded the money, took back the stall, and "sold it a few weeks later" to a rich American for £460.

France having had its art scandal, some people think that England might fitly scrutinise its public art treasures. The number of "original" Romneys and Reynoldses and Gainsboroughs is increasing with such astonishing rapidity that the more cautious buyers are beginning to wonder where they come from. One well-known copyist is said to have been able to recognise no less than seven of his own works posing as originals in a recent Romney exhibition. The same artist has a curious tale to tell of a certain millionaire, one of whose most valuable pictures had somehow been damaged. The artist was sent for to restore it, and one can imagine his surprise when he found that he had to restore one of his own copies.

In a letter to *The Times*, Mr. John MacWhirter, the eminent artist, says:—"For years I have known that there must exist

a sort of manufactory of spurious pictures. I myself have seen dozens ; but there are hundreds of copies or imitations of works by Turner, Constable, Corot, Müller, &c., sold as genuine, and many of these in well-known collections in London, Glasgow, &c. Müller (being second-rate) is perhaps not so much mimicked as the greater men. But the Corot and Constable frauds are notorious.

"Turner, the greatest of the landscape painters, is not easily imitated—his subtle qualities, his refinement, and exquisitely suggested detail are far beyond the reach of the imitator—nevertheless there are plenty of attempts.

"Corot's early works are thorough, highly finished and precise (as the early works of all artists should be). His later works are always charming, graceful, fluent, and full of life. Nevertheless they can be easily imitated in a flippant way. The copies, of course, have not the light touch and the silvery light. The forgeries of this master are extremely numerous.

"Constable, especially in his later works, used the palette knife freely and glazed over broken colour. This sort of thing is easily mimicked by a clever rogue. These things are sometimes very clever, sometimes clumsy; but in all cases the fraud can be detected by a nature lover. The obvious want of knowledge of tree growth and plant life gives them a coarse and ignorant look—a contrast to Constable's masterly way of making clouds move, trees grow, and plants live. He was a student of nature all his life (see the beautiful pencil drawings of trees, &c., in the Victoria and Albert Museum, London).

"Very likely, in spite of this warning and more that I could add, collectors will continue to buy 'deceased masters,' real and sham, with closed eyes as long as it is the fashion, and so-called art experts will advise."

That the character and the antiquity of all sorts of famous works—whether belonging to classical antiquity, to the Middle Ages, to the Renaissance, or to the later centuries—has from time to time been strenuously attacked is no secret. The British Museum itself contains, in the great gallery

which enshrines the Elgin marbles, a head of Hera of severe type, found at Agrigentum, and presumably of the fifth century B.C., which Dr. Furtwängler has persistently denounced as a modern imitation, his statements being, however, energetically controverted by Dr. Murray. Again, among the more recent acquisitions of this national establishment is a most puzzling, yet undeniably fascinating, terra-cotta statuette of Poseidon, of archaic or archaistic type, which, with its fellow, has by French archæologists, and it may be some others at home, been classed among astonishing modern imitations. It is notorious that Europe and America have been flooded with skilful and, it must be owned, delightful imitations of the charming little terra-cotta figures of the third century B.C., chiefly found in the tombs of Tanagra, in Bœotia, and at Myrina, in Asia Minor. Even now the connoisseur approaches things of this type with a certain prepossion against their antiquity, which as often as not has no justification in fact. Another famous fraud was that systematically perpetrated in the earlier years of the nineteenth century in connection with the plaques of nielloed silver, which in the Quattrocento art of Italy were so generally the main decoration of the metal pax, as well as of many small objects of use and decoration. These an artistic forger of North Italy counterfeited on so large a scale, and with such astonishing skill and success, that the nielloed pax of fifteenth century style became as discredited as the Tanagra figure is now. It has not, indeed, even to this day quite recovered its place in the estimation of the collector who may not happen to be precisely a specialist and an expert. A portfolio of these wonderfully imitated designs for niello work may be seen in the print rooms of the British Museum. It is notorious that Italian Quattrocento and Cinquecento bronzes, Limoges and other enamels, goldsmiths' and silversmiths' work, French furniture of the seventeenth and eighteenth centuries are among the things most often and most successfully forged. It is excessively difficult, even for the expert, to tell the finest work of the modern French *ébéniste* and *ciseleur*—of a Dasson, for instance—from his exemplars of the Louis-Quinze and Louis-Seize periods. But then the work of a Dasson and his

follows is well-nigh as costly as that of the *ébénistes* whom, with so exquisite an art, they copy. And then the reproductions of such men as these stand on their own merits, and are not meant to deceive. A notable instance of the perfection with which a modern artist may avowedly copy his predecessor, is the reproduction in the Wallace collection of the famous "Bureau du Roi Louis XV." in the Louvre, made by this same *ébéniste*, Dasson, for Sir Richard Wallace, and on account of its great beauty and fitness retained in the collection when it became a national museum. There are no museum authorities, no collectors, no dealers who have not on occasion been deceived; but only the more obstinate and the more ignorant have persisted in error when once it has been pointed out.

The great importance of the "tiara," and the high position held by the Louvre, has had the good effect of concentrating public opinion on these art forgeries generally, and will, perhaps, have the further effect of restraining the millionaires from encouraging these deceptions, by their too lavish, injudicious, and ignorant purchases. In various public collections lately there have been opportunities of inspecting collections made by some of these *nouveaux riches*, and it hardly required the eye of an expert to discover the lack of judgment and taste which they displayed. In a recent visit to the Glasgow Art Galleries in Kelvingrove, we were rather surprised at the art quality and general character of a case of objects exhibited there by an American millionaire. It would be interesting to have Mr. Paton's candid opinion of the objects in that case. The high prices paid lately for ancient art objects, silver, pottery, &c., have offered great temptations to the forger, and it is not in the permanent interests of art that ignorant wealth should thus inflate the markets from which the great treasure houses, with their trained experts, ought to secure, for the national museums of various countries, those works which ought to be preserved for all time.

General Notes.

TO BAY OR NOT TO BAY.—Two exhibition-rooms have recently been added to the Australian Museum, Sydney, and the curator states that "the lower is lit by windows from the side, placed at such a height as to permit a clear run of wall-cases to be erected beneath them without recourse to the pernicious system of bays." Why does Mr. Etheridge use this strong language? Some authorities advocate the use of bays, while others have pointed out that wall-cases placed beneath a line of windows are in the worst possible position for receiving light. Surely, so far as lighting is concerned, there is no objection to cases placed at right angles to the outer wall and alternating with the windows, as in the Museum of the Chicago Academy of Sciences, recently described in this *Journal* (see Vol. I., p. 287), and in most of the larger galleries in the British Museum (Natural History). This is a practical point of considerable importance to the builders of new museums, and one would like to have an explanation from either Mr. Etheridge or some one else.

FIRE DRILL IN MUSEUMS.—In how many museums is there a regular fire-drill of the staff? In how many does each member of the staff know what to do, should he be on the premises, when a fire breaks out? At the Australian Museum, Sydney, at any rate, as we learn from Mr. Etheridge's last Report, proper precautions are taken. Instruction is confined to the rapid and effective use of what may be termed "first-aid" appliances, such as the building is supplied with, including ladder work. Each member is first taught separately, and then so many in a squad are instructed how to work together. Regular periodical drills of the whole staff are held. The officers are all assigned stations throughout the museum, so many to each hydrant, etc., so that, on an alarm of fire, no loss of time would occur or confusion arise. A printed list of the stations, and the names of those assigned to each, is suspended in every office and workroom throughout the building.

ETHER AS A NARCOTIC FOR WATER ANIMALS.—Curators who desire to obtain specimens of marine or fresh-water animals in a fully extended state, for example, a star-fish with its tube-feet and gills stretched out, should study a paper by Dr. Hjalmar Östergren, entitled, "Aether als Betäubungsmittel für Wasserthiere," in *Zeitschrift für wissenschaftliche Mikroskopie* (Bd. xix., pp. 300-308, February, 1903). The use of ether is, of course, not entirely new, but Dr. Östergren has made improvements in the method of applying it. By shaking

up, in a stoppered bottle, a mixture consisting of one part of ether to twelve or thirteen parts of water, he obtains seven to eight per cent. solution of the ether. In the case of marine animals, sea-water is used; in other cases fresh-water, or a normal salt-solution. Weaker solutions of ether are simply obtained by adding water to the first solution. Since different animals react differently to the ether-water, the method of using it varies. Some can be placed at once in a solution of the strength that is found by experiment to be most satisfactory. In other cases it is better to begin with a weak solution, and then to place the animals in successively stronger solutions, which should be kept at hand in well-closed vessels. Other animals are too strongly affected even by a weak ether solution. Such may be first treated with magnesium sulphate, according to the method described by Tullberg ("Ueber Conservirung von Evertebraten in ausgedehntem Zustand," *Verhandl. d. Biol. Vereins in Stockholm*, Bd. IV., pp. 4-9, 1891). Others which are not affected by magnesium sulphate may be placed in a deep vessel of water, and the ether solution very gently poured upon the top of the water, so that it diffuses quite gradually through it. In yet other cases it is found that, while the animals become beautifully extended at the first application of the ether solution, they subsequently contract before they are completely stupefied. In such cases they should be killed, before contraction sets in, by hot formalin, or some other rapid agent. Dr. Östergren describes the results that he has obtained with echinoderms, turbellarians, nemertines, annelids, sipunculids, molluscs, crustaceans, and fish.

AT HOME.

NEWCASTLE NEW ART GALLERY.—The Newcastle city council has decided to confer the honorary freedom of the city upon Mr. Alexander Laing, who, at a cost £20,000, has presented the city with an art gallery.

NEW ART GALLERY FOR MANCHESTER.—The city council of Manchester has unanimously decided to purchase the infirmary site in Piccadilly, one of the most central and favourable situations in the city, for £400,000, and to erect thereon a new reference library and art gallery, which will cost about £100,000.

NEW ART GALLERY FOR ROCHDALE, LANCASHIRE.—The steady increase in the number of municipal art galleries in Lancashire is a very healthy sign of the times. Rochdale may be congratulated on adding its name to a list which now includes almost all the leading Lancashire towns, with

the exception of Bolton and one or two other places. The new Rochdale Art Gallery and Museum, built by a Manchester architect, Mr. Horsfall, adjoins the Free Library, which stands on the spacious boulevard by the river, not far from the Town Hall. It is an unpretentious stone building of modest proportions, but it has been carefully planned, and the four exhibition-rooms, two on each floor, are well suited for their purpose. Even in gloomy weather the lighting of the large gallery is excellent. The new institution has been built beside the library because it is managed by the Free Library committee, and is supported out of the twopenny library rate which the Rochdale corporation has obtained power to levy. The union of art gallery and library will prove as great a convenience here as it has been in other Lancashire towns, for the pictures and other objects of art and the archæological collections in the one building will supplement and illustrate the books on art and archæology which are preserved in the other. The completion of the building has been celebrated in the best way. A loan collection of modern paintings has been brought together, and was formally opened at the beginning of this month. Municipal bodies and several well-known private collectors have lent a sufficient number of good pictures to make an interesting little exhibition.

NEW DIRECTOR OF EDINBURGH MUSEUM.—Professor James Johnston Dobbie, M.A., D.Sc., of University College, North Wales, has been appointed to succeed Mr. F. Grant Ogilvie as director of the Museum of Science and Art, Edinburgh. Professor Dobbie studied at the university of his native city of Glasgow, where he graduated in arts and with honours in science, and gained the George A. Clarke Scholarship for experimental science, the value of which was £200 per annum, tenable for five years. For a time he acted as Lecturer in Geology in Glasgow University, and under the late Professor Young did a large amount of work in connection with certain sections of the Hunterian Museum. Subsequently he studied in Germany and at Edinburgh University, where he obtained the degree of D.Sc. Professor Dobbie was appointed some years ago to the Chair of Chemistry in the University College in North Wales at Bangor, a post which he at present holds. During his tenure of office at Bangor he has taken an active part in the administrative work of the university, in the organisation of technical education, and has been a representative of the university in the management of the more important schools in the district. He has given special attention to the development of agricultural education and agricultural experiments.

Professor Dobbie has published a considerable number of papers on chemical subjects, and has served on the Councils of the Mineralogical Society and of the Society of Chemical Industry, and is a member of the Council of the Chemical Society.

MR. F. W. RUDLER AND THE LYELL MEDAL.—The note in our last number upon the Awards of the Geological Society appears to overlook Mr. F. W. Rudler, who received the Lyell Medal from the Council. We had intended to express our pleasure at this recognition of Mr. Rudler's services, but he is so well known to the members of our Association and so short a time has elapsed since we published a note on the occasion of his retirement, that it was really quite unnecessary for us to devote a special paragraph to him. Since then, however, we have received the report of the proceedings at the Annual General Meeting of the Geological Society, and we think that it will not be uninteresting to our readers if we here reprint the remarks of the President, Professor Lapworth, in presenting the medal to Mr. Rudler:

"Our science demands for its progress not only men who discover new facts, but also men who will explain and illustrate its facts and theories to those who are anxious to understand and to make use of them. There are few among those who have been both learners and workers in the science during the last 30 years, who do not retain grateful memories of the instruction and assistance which at one time or another you have personally afforded them. Further, our science needs for its appreciation by the economic world and the public those who, being familiar with the facts already gathered together, will present them in a clear and convincing form, and expound their practical applications. In this respect also you have done our science lasting service. Indeed, your long official career at the Museum of Practical Geology has been a record of unselfish devotion to the advancement of the practical and educational sides of geology. In countless ways—in reviews, in the later editions of Ure's famous 'Diictionary of Arts, Manufactures, and Mines'; in your masterly essays on 'Experimental Geology,' and on 'Fifty Years' Progress in British Geology,' delivered as Presidential Addresses before the Geologists' Association—not to mention anthropological and other addresses—you have given evidence of your wide knowledge of the literature and substance of geology and the allied sciences, of your sound judgment, and of your exceptional capacity for transmitting to others the accurate knowledge which you possess. It affords, therefore, to the Council of the Geological Society the greatest satisfaction to award to you the Lyell Medal which, according to the words of its founder, is to be given to one who 'has deserved well of the science.'"

ANTIQUITIES FOR THE NORTHAMPTON MUSEUM.—There was a remarkable discovery, early this month, at Kettering, of cinerary urns on a site just off the main road leading to Stamford. Nearly sixty urns have been found buried less than three feet below the surface, and in several of these were remains of human bones, trinkets, brass tweezers, and pieces

of flint. A skeleton, too, has also been found in close proximity to the urns. All the objects have been placed in the museum at Northampton.

THE GUILDHALL MUSEUM.—Mr. Charles Welch, librarian to the Corporation of London, contributes to the *Library* for February a brief account of the Guildhall Library and Museum. The contents of the latter, he points out, can mainly be grouped in two classes: objects dating from the era of the Roman occupation, and relics of a considerably later period, beginning with the seventeenth century. The Roman collection includes a good deal of pottery and glass, including cinerary urns. Roman funeral customs are also illustrated by a stone sarcophagus, with bust, found at Clapton. The chief archæological treasure is, however, the Roman pavement laid bare in Bucklersbury. Close by, on the site of the Royal Exchange, many other articles were unearthed, and have been placed in the Guildhall Museum, amongst them being several specimens of foot-wear and a wooden writing tablet. Perhaps the most distinctive feature of the more modern exhibits is the collection of pilgrim and tavern signs, the latter including a "Leather Bottel," a very favourite device, partly, no doubt, owing to the popularity of the famous song. The social habits of the Londoners of a by-gone day are further illustrated by leather black-jacks, wooden costrels, and the stone bottles called "Bellarmines," or "Greybeards," some of which are elaborately decorated. With drinking goes smoking, and the Guildhall has many specimens of early tobacco pipes. Mr. Welch concludes his paper by mention of the special collections which form part of his museum. These include one of the horological specimens deposited by the Clockmakers' Company, and a series of maps, prints, and drawings of old London.

THE MANCHESTER MUSEUM, OWENS COLLEGE.—At the quarterly meeting of the Manchester Museum committee, held in March, there were placed on exhibition a number of interesting specimens recently acquired. Among them was a steel mill, used before the invention of Sir Humphrey Davy's safety lamp for producing light in mines which were dangerous on account of explosive gases. This has been presented by Mr. R. D. Darbishire. A collection of ethnological objects from Australia, collected by Professor Baldwin Spencer during his recent journey through the heart of that country, has been presented by him. There were also a number of stone implements from Beluchistan, collected and presented by Sir H. W. Seton-Karr; a set of magnified models of fossil seeds, prepared by Mr. H. Smedley; a series of moths belonging to the *Galleriidæ*, which are parasitic in

the nests of bees, along with ichneumon flies, parasitic upon the moths, prepared and mounted by Mr. J. R. Hardy; and a collection of skulls and other bones of animals sacrificed in ancient times to Zeus, found in the Dictyæan cave in Crete, recently described by Professor Boyd Dawkins before the Geological Society. It was announced at the meeting that the council of Owens College had authorised the transfer of a large room at the top of the Beyer buildings for museum purposes, and had consented to have it cleaned and decorated. Measures were also taken to provide a considerable amount of new casing for the botanical department.

SUNDAY OPENING OF ART GALLERIES.—A proposal was brought before the Glasgow city council in March, asking the Parks and Galleries committee to arrange for the opening of the Art Galleries, Kelvingrove, and also of the museum and art section of the People's Palace but was defeated on vote by 37 against 16.

THE WHITECHAPEL ART GALLERY.—Another art exhibition at the Whitechapel Gallery was opened last month, which is confined in the main to a show of oil-paintings, and though, even amongst oil painters, certain names of substantial importance are not represented, the exhibition is not only extensive, but characteristic. The arrangement of the pictures exhibited is more or less in groups; Mr. Herkomer, for instance, and his following being found together; elsewhere there is a group of neo-Raphaelites—who, it is true, with the exception of the very gifted Mr. Cayley Robinson—do not make much show—and elsewhere again are some interesting performances by those Scotchmen who are of the true Scotch School; whilst in a room apart are the contributions of members of the New English Art Club. From all this, it is clear that, although the exhibition contains, as is not unnatural, too many not very desirable pieces lent by the artists, instead of private owners, it does contain, upon the whole, an assemblage of very various talent; and this evinces, on the part of a committee, a breadth of judgment that is unusual and commendable. The notes upon the pictures which the well-made catalogue contains are of the kind fit to be addressed to a Whitechapel audience—for though the show is to be visited from the West-end, it is to Whitechapel, of course, that it seeks mainly to appeal.

THE NATIONAL GALLERY OF IRELAND.—The National Gallery of Ireland has been reopened to the public, enlarged by the addition of a new wing, and re-arranged. The work of building this wing was commenced in January, 1899, and was completed in January, of the present year. A grant of

£20,000 was given for the purpose by the Government. The new structure was designed by Sir Thomas Deane. Before the building operations were commenced all the pictures previously in the gallery had to be taken down and stored, whilst the new edifice was in process of erection; and when it was finished the pictures belonging to the old gallery had to be replaced, and the new one filled in an appropriate manner, a number of new pictures being hung. All this entailed the expenditure of a vast deal of time and labour on the part of the curator, Mr. Strickland, who may be congratulated on the results accomplished in his department of the work. The new wing extends parallel to the older building, and is nearly two hundred feet in length. The general entrance to the gallery has been remodelled by the application of a new front and porch to the end of it which faces Merrion Square. This new front is in a massive style in fairly good keeping with that of the rest of the edifice. The new wing is connected with the older edifice by passages at both ends of the former. It is in two storeys, each of which contains a series of six spacious and beautiful chambers, each about thirty feet square and lofty in proportion. The floors of the lower series are of teak parquet, and the doorways classically designed in walnut. As it was not possible to obtain light from above for the lower series of rooms—side windows only being available—the device was adopted of cutting off the corners of each chamber and converting it into an octagon, with the result that a sufficiency of light is obtained for each wall surface. The six upper chambers are complete squares, and are lighted in the most adequate manner by glass roofs. The floors here are of oak. Especially have the National portraits gained by their transference to the new suite of rooms reserved for them in the new wing.

GOOD NEWS FOR PHILATELISTS.—It is not generally known what a fine collection of postage stamps the nation has. It is indebted for it to the late Mr. Thomas Keay Tapling, M.P., who left it his entire collection in 1891. Unfortunately the specimens were too numerous for the space and apparatus at disposal in the British Museum, Bloomsbury, and till now it has been necessary to exhibit the treasure by periodical instalments. Cases in the King's Library were devoted to the temporary display of units or "parts of one stupendous whole." Thus the entire museum collection of stamps has had its airing, section after section, but all the sections save that actually on view, have been buried in the catacombs of the British Museum, to the chagrin of philatelists. Mr. Tapling had begun to collect

in his tenth year, and continued the pursuit at Harrow and scarcely intermitted it at Cambridge, and from the commencement he followed it on scientific lines. As an example of his methods of collection, it is enough to say that he systematically advertised in Sydney papers for stamps of the colony formerly current there, by which means alone he took several hundred specimens of the "Sydney Views" and "Laureated" series. It is not surprising that the selling value of the "vast collection of postage stamps, with cards, envelopes, telegraph forms, and several objects relating to postal and telegraphic communication," was at the time of its bequest to the nation estimated at £50,000. Since then prices have risen, and the value of the whole collection was in expert estimation in 1898 deemed to have increased at least threefold since it was left to the British Museum seven years before, and was otherwise but responsibly computed to represent a sum between £75,000 and £100,000. It is satisfactory to learn that the troubles of this fine collection will soon be at an end. A short time will see the completion of "three most perfect cabinets, resting on as many cupboards, also of exquisite workmanship, and calculated, in the accommodation they give to 1,188 doubled-glazed slides, each presenting two faces of, say, a hundred mounted stamps, to provide facilities for a scientific and simultaneous study of the philatelic treasures now and for some time to come likely to be found in the museum."

HAMPTON COURT RESTRICTIONS.—In consequence of the recent malicious damage done to the valuable tapestries in the great hall at Hampton Court Palace, his Majesty's Office of Works has ordered several of the State rooms which are not more immediately under the control of the officials to be closed for the present. These rooms are the small chambers leading out of the great hall, where the tapestries were cut; the Prince of Wales's drawing-room, Cardinal Wolsey's closet, and another apartment in the tapestry gallery. The apartments are so situated that it is impossible for the attendants to exercise proper supervision over them without withdrawing themselves from other rooms under their care.

TOWER OF LONDON ARMOURY.—The announcement that the custody of the armour in the Tower of London has been transferred from the War Office to the British Museum will be received with satisfaction. Since Lord Dillon, the present curator, undertook its classification and re-arrangement it has been put into excellent order. The spurious has been separated from the genuine, the necessary work of preservation has been carefully carried out, and the fine pieces have

been displayed to the utmost advantage. But it was obvious that the War Office was not the public department best equipped for a work of *expertise* of which there are very few competent professors. No man in Europe possesses a more profound acquaintance with ancient arms and armour than Lord Dillon, and the authorities have done wisely alike in continuing him in his post, and in deciding not to remove the collection from its old environment. In its present position it is part of the history of the Tower, whereas elsewhere it would be a mere item in a museum.

OUR NATIONAL PICTURES.—The Treasury officials have just given a decision about the Sunday opening of picture shows which ought to satisfy all reasonable people. They were asked to place the National Gallery and the Tate Gallery, where works of enormous value are preserved, on the same footing as the museums in Bloomsbury and South Kensington. The latter, being fitted with artificial lights, are available for sightseers, every day, but the buildings set apart for paintings do not possess the same advantages. No sort of illuminant would be safe in such places, and has never been supplied. Seeing, therefore, that days are short in the winter months, and fogs plentiful, it is the practice to close the two best collections during the worst Sundays of the year. Though often appealed to, Ministers decline to relax their rules, and in view of the serious risks incurred by gas or electricity most persons will think they exercise a wise descretion. Nobody could desire a finer place for recreation than the splendidly arranged exhibits in the Natural History Museum, while the science and art collection in the Victoria and Albert Museum, like the antiquities at the British Museum, furnish an almost endless source of interest and astonishment. When it is remembered that these treasures are available for all sorts and conditions of men, and that no sort of lighting spoils the work to be viewed, outsiders cannot fairly grumble if safe-guards are taken with respect to collections that cannot properly be seen except in good weather. It would be a great pity to run risks with national treasures that cannot possibly be replaced.

A SUGGESTION FOR INTERNATIONAL ART EXHIBITIONS IN MANCHESTER.—At a meeting of the members of the International Brotherhood in Manchester, there was, as usual, a discussion on a subject connected with the movement. The lecturer of the evening was Mr. B. Lasker, who read a paper on "Nationalism and Internationalism in Art." The main idea of the paper was that the rapid development of international intercourse in recent years has led to a degeneration and confusion of taste, owing to the unwise copying and ap-

preciation of new and dimly understood forms of art production. The remedy, in the lecturer's opinion, was to be sought, not in the localisation of art or other retrogressive measures, but rather in increased opportunities for the study of the art of other countries. These could best be provided by holding exhibitions of works of art of the highest possible standard of excellence, without regard to the time or country of their origin. The lecturer pointed to the temporary exhibitions which are held annually in the London Guildhall as an example of the kind of collections most needed to exercise a wholesome educative effect upon the public taste. He thought that it would be an excellent thing if it could be found possible to hold similar exhibitions in Manchester, as the centre of Northern England. If, as seemed probable, the city council decided to erect a building for art exhibitions, it was likely that the institution of the temporary international art exhibitions, containing selected specimens of the best art of different countries, would receive the approval and support of the corporation. Such exhibitions would not only help everyone by comparison to attain some understanding of the universal laws of beauty, but would also strengthen the spiritual bonds of kinship which are at the basis of the movement towards international brotherhood. A discussion followed the lecture, in which, while some of the lecturer's arguments were criticised, his scheme in its practical bearings was cordially supported.

"THE YEAR'S ART."—The *Morning Post* says:—Mr. A. C. R. Carter, in his admirable introduction to the new volume of "The Year's Art," the twenty-fourth annual issue, published by Messrs. Hutchinson and Co., says: "Art, as charity, should begin at home. Surveying the chronicle of 1902, however, the observer finds little to note betokening ebulliant enthusiasm or fretful energy in British art circles. In one quarter only was activity displayed, and that in the auction arena—a suspect locality indeed. Suspect because of late years there has been a steadily increasing depletion of British art treasures in private possession, which even a very heavy *ad valorem* import duty levied in the American custom-houses in no appreciable degree diminishes. Year by year the Royal Academy, by its superb winter exhibitions of masterpieces loaned from private collections, gives a *clef* to the storehouses of art, and annually it is in the gloomy knowleoge of those behind the scenes that many examples—ordinarily considered priceless—have found only a too ready foreign purchaser. In the columns of the press Mr. Claude Phillips and Mr. D. S. MacColl have made stirring appeals to British art lovers to band themselves together into some body, such as the French Société des Amis

du Louvre, and by voluntary subscriptions, either large or small, to form some fund that might eke out a sparse government grant to any of the national institutions. Such an association of real friends to art, if properly organised, might work an influence far more telling even than that measured by the actual cash contributed by them. It could, above all, hold a watching brief, as it were, for the nation, and make a private owner give time before yielding to the offers of American, French, or Teutonic millionaires. The history of the National Gallery is fortunately a record studded with benefactions and gifts, or purchases—notably the Blenheim and Longford,—where patriotic claims were first considered. With this fine record in mind, a society, properly constituted, could point the moral, and help to restore, or inculcate, a feeling of art patriotism necessary in the proper quarters. That the time has arrived when somebody should be up and doing has been emphasised by a new rule made by the National Gallery trustees in 1902. By this regulation the governing body has pledged itself not to acquire a picture without unanimous agreement. One could conceive such a rule being of value in remote cases, but in a majority of submissions it cannot fail to work unsatisfactorily. Surely ordinary people differ no more widely than in art matters. When experts have their say, disagreements are even more pronounced. If the House of Commons had insisted on a rule of unanimity in dealing with the maintenance and care of the National Gallery itself, the members would one day have been arguing whilst the building was burning. As has been urged in the *Athenæum*, this new rule leads to nothing but an *impasse*. It is an open secret that for some time past it has not been thought necessary to show important works to the trustees before sending them out of the country. If the director of the National Gallery had had the power which the director of a German gallery possesses, several works of first-rate importance would be at Trafalgar Square instead of in alien hands. The restraint imposed upon the director of the National Gallery by a limited parliamentary vote is a sufficient handicap in a competition with a foreign buyer who knows what he wants, without the added yoke of an impossible rule."

ROYAL COLLEGE OF SURGEONS' MUSEUM, ENGLAND.—In the anatomical department much time has been devoted during the past year to the completion of the second volume of the new edition of the Catalogue of the Physiological Series, recently issued. The bulk of the specimens catalogued in this volume (807 in number) have been transferred to their permanent position in the museum, the names on the bottles corrected, and labels made ready for the new numbers.

In correcting the generic and specific names attached to these specimens much assistance was kindly given, as in the case of the first volume of the Catalogue, by members of the staff of the Natural History Museum, particularly Mr. Oldfield Thomas and Mr. G. A. Boulenger. The remounting of the specimens of mammalian brains, upon a plan devised by the prosector (Mr. W. Pearson), by which both mesial and external surfaces of the hemispheres are visible at the same time, has been completed—209 specimens having been thus remounted during the year. This work has entailed a considerable expenditure of both time and labour, not only in the actual remounting of the specimens but in sealing and relabelling the bottles. The additions to the physiological series since last July include several elaborate dissections of the peripheral and visceral nervous systems of vertebrata, prepared with a view to the third volume of the Catalogue; numerous additions have also been made to the series of brains of lower vertebrates and to the section devoted to organs of respiration. Amongst the additions attention may be drawn more particularly to the following:—Two specimens of the brain of an African fish (*Mormyrus*). A dried fragment of a human cerebral hemisphere from a prehistoric burial-ground in Upper Egypt. The brain of a Microcephalic idiot (the dissection and description of this specimen were kindly undertaken by Mr. N. C. Macnamara). A piece of the skin of a Pampean ground sloth (*Grypotherium listai*). Mention should also be made of a large number of valuable specimens of injections of the arterial system of mammals, prepared by Professor F. G. Parsons for his Hunterian Lectures. The osteological series has been enriched by the purchase of a collection of bird skeletons (170 specimens) from Dr. R. W. Shufeldt. The task of arranging these specimens in their proper taxonomic positions has kindly been carried out by Dr. R. Bowdler Sharpe. As most of these skeletons had to be further cleaned, the opportunity was taken to review and, where necessary, to free from grease the box-specimens of birds already in the museum. Amongst the additions to the osteological series are three Dervish skulls from the battlefield of Omdurman, and the skull of a Japanese pug-dog, in which the prognathism characteristic of this breed is very extreme.

Artistic Leavings.—How many people are there who know that in the cellars of Burlington House there can be found a perfect gallery of pictures, and some of them very good ones, too, hidden away and unseen by mortal eye for years? Yet, concerning these same abandoned pictures there are many histories. All of them are such as, after having been either hung at the Academy exhibitions or rejected for the

same, have never been claimed by the painters who presumably submitted them. In several cases the reason for the non-claiming of the pictures was the suicide of the painter, whose relatives were quite unknown. In two other cases the artists had simply disappeared, leaving all their effects, and had never been seen again. Why should not these pictures be placed in the provincial art galleries where the public might have the advantage of inspecting them, and where they could always be found if more legitimate owners appeared to claim them?

ABERDEEN ART GALLERY — CHILDREN'S ESSAYS.—In connection with the loan of the Historical Series of Water Colours from the Victoria and Albert Museum, London, the committee of the Aberdeen Art Gallery arranged a very interesting essay competition amongst the school children. In order that they should have full information of the task set before them, an elucidatory lecture on the collection was given in the gallery by Mr. R F. Martin, of the Victoria and Albert Museum. He also prepared a series of notes for the guidance of the children in studying the collection, and as these notes contain useful information, which may serve other museums, we publish them in full. We shall be glad to be furnished with the result of the competition, and it might be interesting to print one or two selected essays:

NOTES ON THE HISTORICAL SERIES OF WATER COLOURS IN THE ART GALLERY. A SERIES OF DRAWINGS AND PAINTINGS BROUGHT TOGETHER TO SHOW THE HISTORY AND DEVELOPMENT OF THE PURELY BRITISH ART OF WATER-COLOUR PAINTING.

Venerable Bede in the 7th and 8th centuries discovered certain processes of painting. From the 13th to the 16th centuries the monks illuminated MS. prayer books, and the like.

The art of painting very small portraits, or miniature painting, excelled in the time of Queen Elizabeth, King James I. of England and VI. of Scotland, and the other Stuart kings.

In the 18th century there arose a considerable demand for illustrated books on antiquities and topography, containing views of old castles, ruins, &c., and many of the early artists in water colours were engaged in preparing the drawings for such illustrations.

The first period of style was that in which the artist made a sketch of his subject in pencil, or pen and ink, and stained the whole drawing, or parts only of the drawing, with a single colour in black, brown, or grey. Examples of this work are seen in Nos. 2, 3, 4, 19, and 33.

Note.—If the children wished to copy the style of the period, first let them take as an example some well-known building in the city, or, even simpler still, their own schoolhouse. The child, as representing the painter of this period, would sketch the outline of it in pencil or pen and ink, and would then wash over with a single colour, grey or sepia. The aim of those early artists was, therefore, to make a drawing of great accuracy of the view seen of the castle, abbey, or ruin.

Second Period—That in which the artist, after he had made his drawing, added to it the colour as he saw it upon the subject which he was

drawing. For example, if the child or artist was sketching, say, a view of the free library and church adjoining, from the gardens below Union Bridge, he would first very carefully make his sketch, and would then stain certain parts with a single colour, but instead of putting a wash of sepia upon it he would now see, as the children see, that the grass is green, and, therefore, must be represented on the sketch as green, that the bridge is deep brown and so must appear as deep brown, that the buildings beyond are grey and so must appear as grey, the whole of these tintings being sometimes placed over a stained ground, sometimes direct without any stained ground. Two examples by Rooker exemplify this change—Nos. 23 and 24. In each the architecture has passed beyond the mere topographical, and variety of colouring is shown. Specially observe the works of J. Cozens (Nos. 43 and 44), and see how "he dignifies the art, placing it far beyond mere topography to a region of poetic beauty."

Third Period—In which the artist did away entirely with the staining and tinting process, and now placed the true colour of the object he saw direct upon the paper. Girtin was the first to follow out this method, and study can be made of his work, No. 62. Girtin died in early life.

His friend and rival was the celebrated J. M. W. Turner, R.A., who advanced the art to the highest state of perfection. He worked at first in the stained and tinted processes, afterwards excelling in the third process of direct washes of colour, and introduced various other methods of work, such as obtaining lights by scraping the wet masses of tint away by means of a blunt knife, and making use of the paper when white was required.

Turner was a master of atmospheric effects. Study No. 65 as an example of his brown work, and No. 66 as an example of his atmospheric and sea effects. Note that the distant cliffs have been obtained by wiping away the wet mass of grey tint and allowing the white of the paper to form the clalk cliffs. The art at this period—early 19th century—had now become true water-colour painting. Examples should be studied of the works of David Cox, with his lovely effects of atmosphere, De Wint with his pastoral scenes, and Hunt with his still-life subjects.

Note that after 1825 opaque, or Chinese white was introduced into the works of artists. De Wint worked in both methods. In this series are to be seen cattle in which white is obtained by simply cutting away the paint and allowing the paper to appear. Adjoining is a work of De Wint's in which opaque white is used. Examine for careful use of opaque white the works of J. F. Lewis, Nos. 240 and 241. Note that No. 228 is the work of W. Dyce, R.A., born in Aberdeen in 1806; also note the works of Scotsmen, Nos. 18, 59, 157, 188, 189, 200, 228, 253, 270, and 292.

Carefully examine the works of James Holland, Nicoll, Cattermole, Duncan, Sir J. Gilbert, and Carl Haag.

ZOOLOGICAL INDEX.—At the end of last year the Cambridge University Press issued the first volume (1758-1800) of Mr. Davies Sherborn's "Index Nominum Animalium" a work of some 1,300 pages and upwards of 60,000 entries, compiled under the supervision of a committee appointed by the British Association, and with the support of the British Association, the Royal Society, and the Zoological Society. The objects of this important work are (*a*) to provide zoologists with a list of all the generic and specific names that have been applied by authors to animals since January 1st, 1758; (*b*) to give an exact date for each quotation; (*c*), to give a uniform quotation for each reference, sufficiently full to be

intelligible alike to the specialist and the layman. The curators of natural history museums should, above all people, be anxious to arrive at consistency and uniformity in the names applied to their exhibited specimens. The "Index Animalium" can be of great help to them in attaining this result.

THE STEEP PATH OF KNOWLEDGE.—"The ascent of Mount Parnassus"—as the new approach to the free library and museum in William Brown Street, Liverpool, has aptly been named—presents no inconsiderable inconvenience to some of the elderly frequenters of the newsroom, who may be seen toiling laboriously up the wearisome steps, and halting at one or other of the "landings" on their journey to the top. One old specimen of this class, whose nationality was betrayed by his Gaelic-flavoured accent, was recently heard to remark that "a small kiosk might be erected about half-way up, where a body could get a wee nip to help him on the rest of his journey, if the authorities would be graciously pleased to sanction the license on humanitarian grounds."

ABROAD.

BROOKLYN.—Mr. Stewart Culin, recently curator of the Museum of Science and Art of the University of Pennsylvania, has been appointed curator of ethnology to the Brooklyn Institute of Arts and Sciences.

GUSTAV F. R. VON RADDE.—We regret to learn of the death of the director of the Caucasian Museum and Public Library, Tiflis. Born at Dantzig on Nov. 27, 1831, Dr. Radde was appointed in 1864 by the Russian Government to make a biologico-geographical investigation of the Caucasus, and the necessity for housing the material collected by him gave rise to the Caucasian Museum, which was first opened in January, 1867, in temporary premises. The building that now exists was opened in 1870, and its design is largely due to Dr. Radde himself. The work accomplished in this museum was fully described in the *Report* of the Museums Association for 1898, pages 175-183. As a naturalist, Dr. Radde was best known for his studies on the vegetation of the Caucasian lands.

EDOUARD GARNIER.—We regret to learn of the death of this distinguished curator of the National Porcelain Museum of Sèvres.

NEW U. S. NATIONAL MUSEUM.—The last congress appropriated $3,500,000 for a new building with granite fronts for the U. S. National Museum. This will be placed on the mall to the north of the Smithsonian Institution and at a suitable distance from it. Tentative plans for such a build-

ing were submitted to Congress in response to a resolution passed at the previous session, but the fortunate change from brick and terra cotta will necessarily lead to some alterations, particularly in the design for the exterior. The general arrangement of the halls and the amount of floor space will, however. remain practically the same as in the provisional plans. These contemplate a rectangular building, about 480 feet front and 350 feet deep, surrounding two open courts, and about 80 feet high including the basement. The building will afford about 400,000 square feet of floor space, or nearly nine and a half acres, and is designed for four floors. the first and second to be used for exhibition purposes, the basement and upper floor to be for the arrangement of the reserve, or study series, for work-rooms and other necessary museum purposes. A special effort will be made to have the offices of the museum staff not only near the study series, but as near as possible to their respective exhibition halls, while the lighting of the exhibition halls will be mainly from the sides in order to avoid dark corners and reflection. The construction of the new museum is to be in charge of Mr. Bernard R. Green, who had the supervision of the new building for the Library of Congress. The sum of $250,000 was appropriated for the first year. The preparation of working plans will be proceeded with at once and it is hoped that contracts for the work may be made early in July so that the building may be commenced as soon as possible.

THOMAS W. EVANS MUSEUM AND INSTITUTE SOCIETY — By the will of Dr. Thomas W. Evans who has left nearly four million dollars for the purpose, the city of Philadelphia is to have an institute for the teaching of dentistry, as well as for the display of the royal presents and personal effects of Dr. Thomas W. Evans. The monarchs of old extracted wealth from money-lenders by the practice of a rough kind of dentistry. But nowadays an American citizen extracts both teeth and wealth from the kings themselves. The museum will not be without its moral.

PROPOSED J. P. MORGAN MUSEUM.— Laffan's agency telegraphs that according to the *New York Journal* Mr. J. Pierpont Morgan has filed plans for a museum to be built of marble next door to his New York residence, in which he will collect the art treasures upon which he has spent ten million dollars during the past twenty years, and which are now scattered in London and Paris, and various places in Italy and Greece. Mr. Morgan, it is added, intends to follow the example of Mrs. Gardner, of Boston, procuring immunity from Customs duties in respect of his collection by allowing the public admittance to his museum on certain days.

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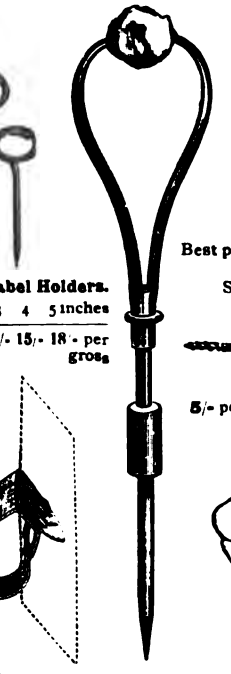

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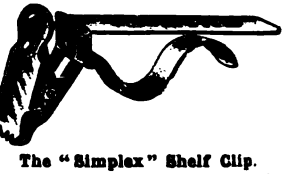

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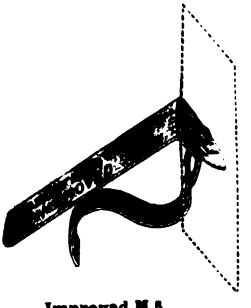

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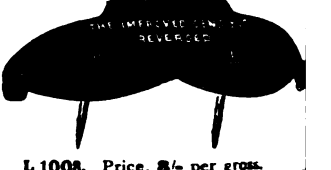

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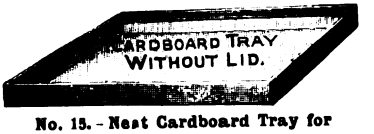

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THE MUSEUMS JOURNAL.

Vol. 2. *May, 1903.* *No. 11.*

Dr. Meyer on some European Museums.

Über einige Europäische Museen und verwandte Institute. Reiseerfahrungen von A. B. Meyer. Abhandlungen u. Berichte des Kgl. Zoologisch. u. Anthrop.-Ethnogr. Museums zu Dresden, Bd. X. No. 1, vi 66 pp., 40 text-figg. 1902.

This instalment of Dr. Meyer's report on his travels will probably be more attractive to European, and especially to English, readers, simply because it deals with institutions with which they are, or ought to be, more familiar. At the same time it has not so great a value as his previous reports, and compared with them is distinctly disappointing, since Dr. Meyer has thought it advisable to refrain from many criticisms which no one is more competent to make, and which it is pretty obvious he would like to have made. He has refrained just because those institutions are a little too near home for candid criticism to be quite safe for the critic. But his readers, as we say, will be disappointed because, although we may not altogether like to be criticised ourselves, still the slight discomfort this causes is more than compensated by the intense pleasure we feel in seeing the faults of our friends exposed.

The institutions herein dealt with are the two main sections of the British Museum in Bloomsbury and in the Cromwell Road, respectively; the museum of the Royal College of Surgeons, the Victoria and Albert Museum at South Kensington, the National Gallery, the Tate Gallery, the Wallace Collection, Kew Gardens, the Horniman Museum, the British Fire Prevention Committee; the Pitt-Rivers Collection at Oxford; the Corporation Art Gallery and Museum of Birmingham; the Manchester Museum, Peel Park Museum in Salford, various Art Museums and the Municipal Technical

Museum of Manchester, the John Rylands Library and the Free Reference Library of the same city; the Anatomical Museum of Edinburgh University, the Museum of Science and Art, the National Museum of Antiquities, and various other museums of Edinburgh; the Corporation Museums and Art Galleries of Glasgow and the Mitchell Library in that city; the Library and the Free Public Museum of Liverpool; the Science and Art Museum in Dublin, the National Library and National Gallery and National Portrait Gallery of Ireland, the Anatomical Institute of Dublin University; the Muséum d'Histoire Naturelle at Paris, the Musée d'Ethnographie, Musée Guimet, the Louvre, Musée de Galliéra, Bibliothèque Nationale, and Bibliothèque St. Geneviève of that city; the Musée Royal d'Histoire Naturelle de Belgique at Brussels: Provincial Museum and Veterinary High School of Hanover.

Apart from the scattered criticism and points of detail which naturally vary according to the different museums, the chief remarks of general interest in this report deal with the questions of light, protection against fire, and the means of ventilation without the admission of dust.

Dr. Meyer's views on the exposure of museum collections to day-light may be gathered from his remarks on the Natural History branch of the British Museum. On page 5 he says :—

> During each of the three times that I was present, the number of visitors was not great, and it would be hard to justify the exposure of these valuable collections to the light from morning till evening; they must deteriorate in consequence. If the curtains are drawn, it is then too dark to see the objects properly. It is the rule in England to open collections to the public during the whole of the day, and the museum people say they cannot manage otherwise, or they would have no money voted to them. But I think they are making a mistake. If only the officials themselves were thoroughly impressed with the damage suffered by the collections entrusted to them, they would readily convince the authorities; but either they set the question aside altogether, or, at least, it is only quite recently that they have begun to consider it. The public would soon be accustomed to more limited hours, if only something were done to make the time of opening generally known; at present this is not the case, for everyone knows that he can visit any part of the collections at any hour of the day.

The foregoing remarks apply to the majority of museums in these islands, and there can be no doubt that our manage-

ment of this question contrasts very strongly with the method followed on the Continent. There, the collections are in many cases open to the public on only three or four days in each week, and then for perhaps not more than four hours at a time. It is not, however, any fear of the collections being damaged by exposure to light that causes this exclusion of the public. The scientific visitor, especially the foreigner, is always welcome, and as such I have visited many of these museums at all hours. It is no doubt often the case that one finds the curtains drawn or the shutters closed, but this is really because it is not worth the trouble to open them if no visitors are coming. On the other hand, I have seen some collections quite as much exposed to the light on days when the museum was closed as during the hours when it was open, perhaps because it was too much trouble to draw the curtains, or even because there were not any. The fact is that the length of time during which museums are open on the Continent depends far more on financial considerations than on any desire to preserve the collections. English museum officials have a much greater appreciation of the damage done by light than Dr. Meyer ascribes to them. But it must be remembered that not all portions of a museum's collection are affected by light: fossils and skeletons not at all; shells and similar hard parts of invertebrates probably very little indeed. On the other hand, birds, mammals and Lepidoptera suffer very much. Similarly sculptures, coins, metal-work, and probably porcelain do not suffer, whereas pictures, textiles, and embroideries may have their colours entirely altered. It would be a pity to close the whole museum because some of the objects contained in it would not stand exposure to the light. Such objects may be kept in separate rooms open for shorter periods; or they may be protected by additional coverings, as is the case with the exhibited series of insects at the Natural History Museum; or they may be kept in drawers only exposed to the light for those few minutes of each day during which visitors may chance to pull them out; or finally, as is very generally the case at the Natural History Museum, the exhibited series may be drawn from specimens that it is possible to replace, while the rarities

are kept safely in the darkness all day long. Of course, so long as a museum exhibits all its possessions, it is inadvisable to keep them open to the light for any length of time; but if specimens are definitely selected with the object of public instruction, the longer the hours of exhibition the better will that object be attained.

It may also be pointed out that the evil effects of sunlight are most potent during the brightest part of the day—just the time at which even the most cautious museums are open to the public. In this country, at any rate, it can make very little difference to the collections whether they are closed at 4 p.m. or at 8 p.m.; but it makes a good deal of difference to those members of the public whose other duties prevent them from visiting a museum before the evening.

Dr. Meyer looks at this question from the point of view of the German museum official. In that country very little attention is paid to the public. For a limited number of hours, a motley throng tramps through the galleries, gaping at a few more prominent exhibits, but never stopping to study, or venturing to make enquiry of the officials. There one does not see collectors with their fossils, or their butterflies, or their birds' eggs, or their shells, dotted about the galleries, attempting to compare their specimens with those on exhibition. Instead of this, a limited number of severely scientific students come to the private workrooms, where they have the fullest access to any portions of the collection that they may need. A great deal is written in the public press of this country about the superior scientific education of the Germans. It is true that a change is going on there, perhaps a little more rapidly than it is with us; but among the present generation one certainly does not find so many people with a generally intelligent interest in science, or with some natural history hobby, as one does in this country. It would be going too far to say that the number of scientific amateurs is directly dependent upon the length of time that the museums are open to the public; but there can be no question that the greater facilities offered by our museums are a distinct encouragement. Any museum official that has seriously

considered this question would oppose the retrogressive steps advocated by Dr. Meyer, on far broader grounds than a fear lest his grants should be reduced.

If, however, Dr. Meyer has fault to find with the museums of this country on the score of light, he considers that two of them at least are in front of all the museums of the world, as regards ventilation. Those two are the Corporation Museum and Art Galleries of Glasgow, and the Free Public Museum of Liverpool, which are ventilated on the Plenum system. By this method, air is sucked into the building, washed and filtered by being passed through a damp screen of fibre, and when necessary, warmed by passage over a large surface of coils heated by steam. It is then driven by large fans into the main shaft, from which it passes by subsidiary shafts into all the rooms of the building. It enters each room at a height of some 6 feet above the floor and is taken away by an extracting shaft at floor-level. In the Manchester Technical School, also ventilated on this system, the pressure of the air within the building is so much greater than that of the outer air that the opening of the windows makes no difference to the proper action of this method of ventilation. It is stated that a similar pressure exists in the Liverpool museum, but both here and at Glasgow, windows are not made to open. As Dr. Meyer points out, it is a very convenient thing to be able to open the windows for the purpose of cleaning, and he suggests that, even if it be not possible to have sashes or casements such as would have to be open during the whole process of cleaning, the windows might at least be turned about a vertical median axis, and screwed down to their frames. In this way a window could be turned round and cleaned on both sides very rapidly without interfering with the general current of air for more than a few seconds.

It would be impossible here to give any details of this method of ventilation; but, as Dr. Meyer urges, it is of the highest importance for museums, especially in the towns of this country where dirt is one of our greatest enemies. Those who are about to build new museums should, therefore, obtain a description of the method from the firm of William Key, Havelock Street, Glasgow. It would doubtless

be interesting to our readers if the heads of those museums in which the system has already been employed would contribute some notes on the success of its working.

Dr. Meyer notes as a curious fact that the museums of Glasgow and Liverpool adopted the system quite independently, and that neither knew that it was in use at the other museum. This shows what a valuable means of intercommunication the *Museums Journal* might prove if only our members would remember the couplet:

> Ignore all selfish ends and interests of thine own,
> He lives for little good who lives for self alone.

Among other buildings in which this system is used are the John Rylands Library at Manchester, the new Central Municipal Technical School at Liverpool, and the University and Public Library in Aberdeen. It is to be hoped that during the forthcoming meeting of the Association in Aberdeen, some opportunity will be afforded members for studying the system in operation.

We have in a previous article dealt with Dr. Meyer's views on the protection of museums against fire, so that in this place it need merely be stated that a few interesting details may be gleaned from the present report. Dr. Meyer evidently thinks that the museums of our country have something to learn in this matter. Of the Natural History Museum, for example, he says: "There is no question here of any thorough protection against fire. Much superfluous wood is used, and the situation of the heating apparatus is unsuitable." In this there is no doubt some truth, but the precautions taken against fire are more thorough than Dr. Meyer seems to be aware of.

In discussing individual museums, Dr. Meyer has frequent opportunities of expressing his opinion that a side-light is better than a top-light. There are many people who hold the contrary view. It is no doubt the fact that in a hall without galleries round it, a top-light is fairly effective, and enables one to utilise the whole of the floor-space. It is also the case that many rooms in which side-lighting alone is adopted, are insufficiently lighted, while many of the objects are in positions where they cannot be seen at all. On the other hand, when a

top-light is used, not only does any gallery around the hall cast a deep shadow, but the back part of the lower shelves in each case becomes useless for exhibition purposes. Moreover, if moderately flat table-cases are employed for small objects, the observer's head gets in his own light. The difficulties of reflection also are far greater with a top-light. Side-lights give a much more effective illumination of the specimens, and one that, in the case of art objects, is more natural, appropriate, and therefore more tasteful. The Manchester Museum at Owen's College, which has both methods of lighting, is adduced to prove the superiority of side-lights. The best lighting, however, is obtained when the cases are placed, not at right angles to the source of light, but sloping away from it, as in the National Gallery of Ireland alluded to by Dr. Meyer, and in the Mineralogical Gallery of the National Museum at Budapest. In this way, the light falls more obliquely on the objects, throwing up their details, while reflection from the glass is entirely avoided. If a museum be properly planned, it is perfectly possible to get the full benefit of side-lights. Dr. Meyer instances the new Natural History Museum at Brussels as one which can teach many lessons in respect to lighting and economy of space.

The important question as to the orientation of a museum is partially answered by Dr. Meyer in his remarks on the Provincial Museum of Hanover. He says here that when the building is almost square, the main front should face the south-west; but when the building is more oblong, the ends should be directly to the north and south. The reason, though not given, appears to be that in the former case the blinds can be pulled down on successive sides of the square, as the sun passes round it; whereas in the other case they are pulled down first on the east and then on the west.

We may now consider a few minor points discussed by Dr. Meyer.

In speaking of the Natural History branch of the British Museum, he says that the opportunities for sitting down are few. As a matter of fact, there is probably a larger proportion of seats in this museum than is to be found in most. At the same time more might be introduced with advantage.

The catalogues of this museum are not given away freely, as stated on page 6. A certain number, it is true, are presented to those who have assisted in their preparation; but others are either sold, or sent to institutions with whom the museum exchanges publications.

Spittoons are a source of perplexity to Dr. Meyer. He remarks on their absence from our museums and seems to approve of it. "Museums," he says, "are certainly places in which good manners may well be taught, and the public should be accustomed to spit in its pocket-handkerchief." Unfortunately the public has a habit, not observed by Dr. Meyer, of spitting down the hot-air gratings.

Huxley was never curator of the Museum of the Royal College of Surgeons, as stated on page 7.

Criticism of the Victoria and Albert Museum (the South Kensington Museum) in its present stage of transition is beside the mark. But let its authorities see that they do not give cause for a repetition of the sentence, "Its *too much* overwhelms the receptivity of the freshest of visitors; this *too much* is an aberration of museal science. Only the best should be immediately accessible."

In the course of his very laudatory remarks on the Manchester Museum, Dr. Meyer alludes to the printing and publication of labels, and regrets that, since most of them are in the English language, they cannot be used by German museums. The Dresden Museum has, however, for some time past, purchased the Latin names of families of birds from Manchester, and uses them in its exhibition cases. Dr. Meyer states that he has long had the intention of reproducing the descriptive labels in use at the Dresden Museum, for distribution to other museums.

Many of the museums herein described present, in their architectural construction, isolated features worthy of study and, in many cases, of adoption by those about to build new museums. For instance, while from the Zoological Galleries of the Muséum d'Histoire Naturelle at Paris we learn, as from many others, how a museum should not be planned, on the other hand, the Galleries of Anatomy "present a note-

worthy advance. They manifest a rare taste, and the building has almost succeeded in becoming a faultless model. It departs in the happiest manner from the stereotyped pattern. Everyone who has to build a museum should make a study of this Parisian building, in order to adopt its good points."

The ironwork, nowadays so much employed in the construction of our museums, is, as a rule, stigmatised as in "railway-station style." Those who would understand how this material may be used in an artistic manner, should visit the Maison du Peuple, built by Horta, in Brussels. The Natural History Museum in Brussels also deserves careful study, although its complete adaptation to its own special needs would render it unsuitable for slavish copy in any other place.

In spite of these and other praiseworthy features, the conclusion to which Dr. Meyer comes is that "on the whole, the art of building natural history museums is still in the cradle. For the most part, such museums are planned in a quite erroneous manner. It is only here and there that one hits upon rudimentary attempts which foreshadow the dawn of a new era in the realisation of this branch of human faculty. Similarly, the art of the interior arrangement of such museums is, for the most part, still in a state of original sin. The chief reason for this appears to me to be that, on the one hand, people are far too ready to accept what is placed before them, without exercising independent judgment or wishing to better it, and, on the other hand, they make experiments out of their own head, without utilising the experience of others. Moreover, the building of natural history museums is, as a rule, carried out too quickly. Once a new building is determined upon, and the money for it granted, no time is allowed for the sufficient preparation of the plans. Some one plan is suddenly chosen, with all its faults into the bargain. But the interior arrangement fares, if possible, even worse. Usually the building has swallowed up more money than was foreseen, so that great economy has to be exercised for the interior arrangements; they are, it is true, no less essential, but it is nearly always the case that far too little importance is attached

to them, and that they are far too little considered. I am convinced that in the distant future a natural history museum will appear very different to our present often very defective attempts; but even to-day it is possible to build art museums in a more perfect fashion, perhaps because their contents are not so various, and do not present such difficult problems for solution."

If Dr. Meyer's present report does not attempt any plan for the museum of the future, at least it provides us with many examples of what to avoid. As Professor Ray Lankester most truthfully observed in his presidential address to this Association, "the chief thing to avoid is the eminent architect" —the man who thinks he is getting a fine chance of showing what he can do, who produces a magnificent elevation regardless of expense, and who pays little more attention to the interior fittings than to see that the decoration is sufficiently striking. Many museums have defects introduced into them in order that they may harmonise with some neighbouring building devoted to quite other purposes: a museum ought not to be afraid of proclaiming itself a museum, and should pass neither as a Corn Exchange nor as a Technical School. It is a mistake to build a museum on a rigidly circumscribed plot of ground; also a mistake to adopt a plan that does not permit of indefinite extension. No definite rules can be laid down, because no two collections can be exactly alike, and the museum should be built to suit the collections it has to contain. In England few people yet understand what this last sentence means.

Above all things let it not be forgotten that, however important may be the public side of the museum, namely, the exhibition galleries, yet that the rooms for the reserve collections, which ought to be most readily accessible to students from all over the world, are certainly of no less importance; while most important of all are the working rooms for the staff, which constitutes the brain of the museum.

The principles just laid down are for the most part well enough known to museum workers. But they cannot be re-

peated too often; for the public, which has to find the money, is very far from understanding them. We should, therefore, be grateful to Dr. Meyer for gathering together in these reports a large store of facts which may give our arguments greater weight.

F. A. B.

On the use of Pure Spirit for Preserving Specimens.

THE following memorial is being promoted for presentation to the Chancellor of the Exchequer, and any museum officials who desire to support it are requested to communicate with Dr. S. F. Harmer, Museum, Cambridge:—

We beg leave respectfully to call your attention to a serious disability under which certain scientific institutions in this Kingdom suffer.

It is provided by Part 1, Section 8, of the Finance Act, 1902, that the Commissioners of Inland Revenue may authorise the use of pure spirit without payment of duty in the case of any art or manufacture where it shall be proved to their satisfaction that the use of methylated spirits is unsuitable or detrimental. In No. 12 of the Regulations issued December, 1902, it is however stated that the Board of Inland Revenue "have already decided that the use of duty-free spirit for the preservation of Natural History or other specimens cannot be allowed."

We, the undersigned Directors of Scientific Institutions and others primarily concerned in the preservation of Natural History specimens venture to beg for a more lenient and helpful reading of the Act.

The majority of biological investigations necessitate the use of alcohol, and we believe that it is important in carrying out such investigations to be able to deal with pure re-agents. Those of us who are interested in the preservation of scientific material in museums would specially point out that the fauna of the world is rapidly being changed by human influence, and that many species which are still obtainable are in process of

extinction. If then it can be shown that the use of methylated spirit is prejudicial in such cases, we submit that the privilege of using pure duty-free spirit is greatly to be desired in order to enable us to preserve in our collections specimens which it may hereafter be impossible to procure.

The chemical processes which take place during the interaction between various forms of spirit and organic matter are so obscure that it is impossible to state the disadvantages of using methylated spirit in a precise manner. It is, however, the almost universal opinion of experts that the disadvantages do exist.

Methylated Spirit as a Reagent.

We have consulted Dr. Paul Mayer of Naples, who is probably the greatest living authority on this subject. Dr. Mayer states that there is not the slightest doubt that methylated spirit injures the staining properties of tissues, and that it cannot satisfactorily be used in the preparation of staining solutions. Dr. Mayer's opinion is completely in accordance with the experience of many of us. We venture to remind you that investigations on the finer structure of animals and plants are absolutely dependent on the use of stains, and to point out that methylated spirit thus permanently alters the scientific material preserved in laboratories and museums in such a way as to render it unsuitable for one of the uses to which it is important to put it.

Methylated Spirit as a Preservative.

Dr. Mayer believes that delicate specimens kept in methylated spirit undergo a gradual shrinkage of considerable extent. Mr. G. A. Boulenger, F.R.S., of the Natural History Departments of the British Museum is so convinced of the deleterious effect of methylated spirit that he uses pure spirit for the preservation of the majority of the specimens under his charge. As a result of enquiries made by the Musée Royal d'Histoire Naturelle de Belgique, the authorities of that institution came to the conclusion that no form of alcohol other than pure spirit gave any guarantee for the permanent preservation of natural history specimens. Pure spirit is accordingly exclusively used in that museum, even though duty has to be paid on it.

The Director of the Konigl. Zoologisches Museum at Berlin states that pure duty-free spirit is used in that institution and in all other scientific institutions throughout Germany. Pure spirit only is used at the Zoological Station at Naples, a place where the preservation of delicate specimens has been raised to the dignity of a fine art. Finally we may point out that H.M. Treasury may be considered to admit the superiority of pure spirit for the purposes above indicated by providing for its use in the Natural History Departments of the British Museum.

We consider that it is thus an established fact that biologists in this country are at a disadvantage as compared with those of other European countries. The price of pure spirit is at present so high as to be prohibitive in the case of most of our scientific institutions. We beg leave most respectfully to call your attention to the effect of the present interpretation of the Finance Act in interfering with the progress of biological research, and in leading to a deterioration of material much of which it will be impossible to collect in the future.

It is admitted that the methylated spirit now in use is fairly adequate for some of the purposes for which spirit is required in biological institutions, and in particular in many of the cases where this re-agent is employed on a large scale. We should welcome a regulation permitting laboratories and museums under proper scientific direction to replace a limited proportion of the methylated spirit at present used by duty-free spirit.

Museum Publications.

Anales del Museo Nacional de Buenos Aires. Third Series, Vol. VIII, 1902.

The first paper, by Florentino Ameghino, is a synoptical chart of the sedimentary tertiary and cretaceous formations of Argentina in relation to the study of the descent of the mammalia, and gives in a tabular form the freshwater and marine formations with their corresponding series of mammals and furthermore tabulates the mammals in other parts of the

world found in similar formations. The results are summed up in a very clear manner. The oldest forms appear in the lower cretaceous beds of the Rio Tarde where are to be found the *Proteodidelphys* allied to the living *Didelphia*. An article on the metamorphosis of the *Uroplata* (*Heterispa*) *costipennis* (Boh) Chap. (Hispidæ) by J. Brethes is an interesting entomological study. Owing to the *Sida rhombifolia* L. on which the eggs of the Uroplata are deposited being very common at Buenos Ayres, the insect is of comparatively frequent occurrence. The eggs are deposited in the lower part of the leaves of *Sida* to the number of 4 or 5. The observations of the writer are couched in the most flowery language with appropriate sentiments, such as this with which the article ends: "On a beau raisonner, la nature nous surpasse toujours en expedients." The director contributes a well-written and carefully thought out paper on the descent of the *Proboscidia* with especial reference to South American types. He advocates the theory that the *Proboscidia* first arose in Africa, spreading over the earth at some epoch between the upper cretaceous and miocene periods, and that these primitive forms had a character intermediate between the *Pyrotherium* of Patagonia and the *Mastodon* of the old world. Considerable attention is given to the types of dentition, and the points are plainly elucidated by the help of 38 figures and a good diagram. This is followed by a paper on the parasites of *Oecticus platensis* by C. Schrottky, describing two parasites, one belonging to the *Ichneumonidæ*, the other to the *Tachinæ*. The *Oecticus* also possesses another parasite belonging to the *Chalcididæ* described by Mr. Kirby in 1885. The next article is a continuation of the researches by Carolo Spegazzini on the *Mycetæ* of Argentina, and comprises a description of each species, usually new to science, with the habitat. Another paper by C. Schrottky deals with the new species of *Hymenoptera* in Argentina and gives evidence of very great labour in this field. The plan followed in these articles of describing the distinctive features of the various types in Latin is worthy of imitation, as by this means precision is attained and the results of investigation made easily accessible. The archæology of Argentina has apparently a most devoted worker in Juan B. Ambrosetti, whose

paper on the tomb of "La Paya" lately discovered in the valley of Calchaqui (Province of Salta), gives some valuable and original observations on the early inhabitants of the country. Among the objects found are many of gold, one being a beautiful ornamented diadem, of which a drawing is given, numerous bronze articles, comprising axes of various types, bracelets, and knives, some wooden implements, and a great quantity of pottery, the jars especially bear rich ornamentation, the symbolism of which, especially of the animal forms depicted, is entered into at length. An interesting note on the origin of the *Ratitae* by Dr. H. von Ihering is followed by a series of ornithological notes by E. L. Arribalzaga, chiefly concerning new species, and a paper on the systemic enumeration of the birds of the Province of Tucuman by Miguel Lillo, giving a record of observations and having a good bibliography annexed. The last paper is by Florentino Ameghino and is an attempt to prove that *Pyrotherium* is not either the ancestral form of, or related to, the *Diprotodon*. The points of divergence chiefly emphasized are the dentition, the feet, the cranium, and the fact that *Pyrotherium* was marsupial whilst *Diprotodon* was truly placental.

The publication of these Annals shews that there is plenty of work being done on the hitherto only partially explored fauna and flora of southern America. The articles are all of an interesting kind and mark the progress that is being made in scientific work and research in Argentina.

CITY OF WORCESTER.—REPORT OF THE LIBRARY AND MUSEUM COMMITTEE ON THE PUBLIC LIBRARY, MUSEUM, AND ART GALLERY for the year 1901-02.

As regards the library, we note with approval that the public are allowed to select their own books from the open shelves, and it is stated that this system has been the means of more than doubling the issues, and that there is an upward tendency in the issue of better class works. Mr. Edwards, the curator, in his report states that considerable progress has been made in the work of remounting and relabelling the specimens during the year, much help having been given in the department of Conchology by Mr. A. Wood. The classification adopted in this section is that of the list pub-

lished by the British Conchological Society. A new case has been purchased by a grant from the Lea Bequest, and the entomomogical section has been mapped out and labelled. The permanent summer exhibition of living wild flowers and fungi has again proved very successful. The ethnographical collection has been considerably increased and more space is badly needed. The donations include the "Mathews" herbarium of British plants, the type series of British brambles, ethnographical specimens from the Congo district and Vera Cruz, and the albatross. The educational advantages of the museum have been largely utilised by the various scholastic bodies. In the art gallery three exhibitions were held: the spring one was open 109 days and visited by 3,241 persons, the summer one was open for 40 days and attended by 1,954 people, the autumn exhibition was open from the 16th September to the 31st December and visited by 3,124 persons. The city council have decided to admit the public free of charge, and have voted an additional sum of £60 per annum to cover the amounts hitherto received as charges for admission. The exhibition of work by the art school students in 1902 was open on 26 days and visited by 2,053 persons. The gallery was open on 270 days, with a total number of 10,444 visitors.

FORTY-NINTH ANNUAL REPORT OF THE COMMITTEE OF THE PUBLIC LIBRARIES, MUSEUMS AND ART GALLERY OF THE CITY OF LIVERPOOL, for the year ending 31st December, 1901.

In the libraries open bookcases containing new and popular works have been introduced, from which readers can select books without going through the usual book order formula, and this new departure has been greatly appreciated. The museums comprise the Derby Museum and the Mayer Museum, which are housed in a building erected at the cost of the late Sir Wm. Brown in 1860. Since 1896, a period of six years, 45,755 specimens of natural history, and 6,222 specimens of ethnography have been added to the collections. Part 2 of Vol. 3 of the Bulletin of the Liverpool Museum was issued on May 10th. From January 1st to May 3rd, 1900, 95,041 people visited the museum, while in 1901 on 262 days there were 304,942 visitors. A very satisfactory attendance

of school children is reported. 21 lectures were delivered by members of the staff on Monday evenings, with a total attendance of 2,136. Since 1894 much time has been devoted to reducing stuffed specimens of birds to skins for the study collection, which will be stored in a series of cabinets erected on the upper floor for the exclusive use of students. It is proposed to exhibit on the upper floor a series of types of the main groups and sub-divisions of the Animal Kingdom, and to arrange the mineralogical and geological collections so as to illustrate the chief points in these subjects, and to exhibit the main facts of the geographical distribution of animals and plants, and on the lower floor to have as complete series as possible of the products of the "Local Area." The donations comprise a large shell collection of over 10,000 specimens, bequeathed by Mrs. MacIver, birdskins from Canon Tristram, wax models of flowering plants and fungi by Mr. H. E. Heath Smedley, F.L.S., and 120 herbarium specimens from New South Wales.

The Mayer Museum is about to undergo a complete revision. 933 acquisitions have been made. The Walker Art Gallery, opened in 1877, has since that period acquired between 700 and 800 works of art of a money value of over £100,000. The Autumn Exhibition was visited by 61,816 persons, in addition to 3,268 season ticket holders, and 10,316 pupils admitted free of charge. 5,815 works have been sold at these exhibitions since the opening of the gallery. It is noted that the hanging space is quite inadequate for the proper display of the collection. During the year the gallery was open 310 days, excluding Sundays, with a total number of 433,854 visitors, making a daily average of 1,353, the attendance on Sundays was 14,384, an average of 423.

CITY OF NORWICH.—THE REPORT OF THE CASTLE MUSEUM COMMITTEE TO THE TOWN COUNCIL. 1902.

During the year the number of visitors was 118,697, as against 109,249 for 1901, the increase being mainly due to the increased attendance on Sunday afternoons. The extension of the art gallery has been completed. Mention is made of the proposed visit of the Museums Association in 1904. The

work of revising the labels in accordance with modern nomenclature has been continued. The amount received for admissions and sale of guide books, &c., was £289 10s. 0d., being £32 less than in 1901.

THE GEOLOGICAL SOCIETY'S MUSEUM. List of the Types and Figured Specimens recognised by C. D. Sherborn, F.G.S., in the Collection of the Geological Society of London. Verified and arranged, with additions, by J. F. Blake, M.A., F.G.S. (With an appendix.) London, 1902. Bound in cloth, 3s. 6d.; paper wrappers, 3s.

Our readers are probably aware that the question of their museum has long been a burning one among the Fellows of the Geological Society of London. From time to time readers of papers before the society and other Fellows have presented to it specimens illustrative of those papers, or otherwise of special interest. This was naturally more the case in the early days of the society, before there was any Geological Museum such as that now existing in Jermyn Street, and before the geological specimens in the British Museum were placed in a separate department. In those old days it does appear to have been the case that some few people made serious use of the museum of the Geological Society. Nowadays, when other museums are more important and more accessible, the sole visitors to the collection of the Geological Society are those who wish to see one or other of the specimens of historical interest. In fact, during the past year the report of the council states that the collections were examined on not more than twenty-two different occasions. Possibly more use might be made of the museum if Fellows and geologists generally had a better knowledge of the treasures contained in it. Up till the present year, it was almost impossible for an individual worker to obtain this knowledge except by the exceedingly laborious process of himself working through every drawer in the museum; and even had he adopted that course, he would not have found the specimens properly identified or labelled. Now, however, thanks to the successive labours of Mr. C. Davies Sherborn and Mr. J. F. Blake, it is at last possible for any member of the public to purchase this list of the types and figured specimens, and from it to ascertain those that have been

recognised as existing in this museum; and if he then visits the museum itself he will find that those specimens have been properly labelled.

The work opens with a list of the papers in which all specimens now in the society's museum have been described, and these papers are arranged under the headings:—British Islands, Continent of Europe, Asia, Africa, America, and Australasia, the entries under each heading being given in chronological order. Each title is followed by a list of the fossils mentioned in it, the types and figured specimens being distinguished by clarendon and small capitals respectively. This part of the work is followed by an index to all generic and specific names, as well as to the names of the authors whose papers are quoted. It would have been more convenient had these latter been given in a special index, since their 106 names are quite lost in the multitude of systematic names. Following the index is a synopsis of the contents of the Geological Society's Museum; but this, being unprovided with any index, is not of much use to the enquirer. It may, however, serve to shew the Fellows of the Geological Society what riches they are still hiding in a napkin.

The book as a whole will be of very great service to working palæontologists, who should be deeply grateful to Messrs. Sherborn and Blake for their labour of love, as well as to the society for publishing the work at a price that is obviously less than the actual cost per copy.

"PROCEEDINGS OF THE U.S. NATIONAL MUSEUM," Vol. 24., 1902.

This is a record of much original research in many departments of natural science. It is not possible to do more than enumerate a few of the more important of the 34 articles which comprise the volume. Of these 34 no less than 10, covering nearly half of the 760 pages, are monographs devoted to the enumeration and description of various orders of fishes occuring in Japanese waters. Each article is a complete monograph on the subject to which it refers. Throughout this volume the names of the authors of genera and species are always given in full, and in lower-case type exactly the same as the type in which the scientific name is

printed in capitals. Typographically, the result is excellent, while the advantage of having the name in full and not in mystifying initials is obvious. Dr. Bather, in his paper on Names on labels (*Museums Journal*, p. 137—143), made an earnest plea for this to be done in every case, whether on labels or in catalogues, if it were necessary to indicate the first author of the species, and we would recommend the authorities of the British Museum to follow the example of the U.S. National Museum in this direction. La Guaira, Venezuela, the scene of the recent international naval demonstration, has supplied collections of mammals, birds, batrachians and reptiles, which are classified and described in three articles. Collecting in Venezuela seems to be attended with certain initial difficulties other than those arising from want of food and accommodation, for some difficulty and delay were caused by the authorities at La Guaira in passing the guns through the Customs. The list of American Butterflies is enriched by no less than 200 new species described by the author from his own collection now the property of the U.S. Museum. A very elaborate article is "A Review of the Larks of the Genus Otocores." Two maps accompany the paper and illustrate the breeding places and distribution of these horned larks. "A List of Generic Terms proposed for Birds during the years 1890 to 1900 inclusive" contains 675 names, and will supplement—will indeed, complete for the present—Waterhouses, "Index Generum Avium." Much interest will be felt by naturalists in the "Illustrations and Descriptions of New, Unfigured, or Imperfectly-known Shells—chiefly American—in the U.S. National Museum," while the "Fossil Fresh-water Shells of the Colorado Desert" are described with reference to their distribution, environment, and variation. Many of the papers are adequately, and some profusely, illustrated. The volume is a credit to the museum and its contributors and will prove of great use for reference to all engaged in that important but often disputed museum work of classification and nomenclature.

General Notes.

AT HOME.

Mr. Lawrence Inkster, Hon. Secretary, Library Association, has kindly written to say that at the monthly meeting of the Library Association to be held at 20, Hanover Square, W. on the 21st inst., at 8 p.m., Mr. John Minto, M.A., of the Brighton Public Library, will read a Paper on "Public Libraries and Museums." If any of the members of the Museums Association would like to attend this meeting and take part in the discussion on the paper, they will be heartily welcomed, as the subject is one which must closely interest both Associations.

BOGUS ANTIQUITIES.—With reference to the manufacture of bogus antiquities and works of art in Paris, *Truth* says:—One of my readers was in Rome a year or two ago, and, in conversation with a native, asked what the numerous proprietors of the curiosity shops, in the district where the Ghetto used to be, found to do during the summer. The answer was, "Oh, they are busy enough. It is too hot to go out, so they stop indoors and make the antiquities which they sell to the English and Americans in the winter."

DEATH OF MR. LOUIS FAGAN.—The recent death at a comparatively early age of Mr. Louis Fagan, for a long time one of the principal officials of the Departmeut of Prints and Drawings of the British Museum, will be regretted by a large number of students and others to whom he gave much valuable advice and assistance. Mr Fagan's "Collectors Marks" is still the most useful manual of the kind for the amateur of drawings and engravings, and among his other productions connected with literature or art may be mentioned the catalogues of the works of William Wollett and William Faithorne, the engravers, the "Life of Sir Anthony Panizzi," "History of the Reform Club," and studies of the Michael Angelo drawings at the British Museum and of the work by Correggio at Parma. Mr Fagan also edited a portfolio of reproductions of Bartolozzi.

BOTANICAL SPECIMENS.—The Scientific Department of Messrs. Backhouse & Son, of York, has now been converted into the British Botanical Association, Limited, with Mr. Arthur H. Burtt, D.Sc. as director. The British Botanical Association, Ltd. is empowered to carry on and extend the work hitherto undertaken by the Scientific Department in all its branches (including the supply of botanical material of all

kinds for teaching purposes), and, since under the Memorandum of Association all profits are to be devoted to the further development of the Association, the directors confidently anticipate the generous co-operation of all educational authorities and teachers in their undertaking.

DUBLIN ART GALLERY—GIFT OF PICTURES.—In order to stimulate the corporation of Dublin to provide a Gallery of Modern Art, Mr. Nathaniel Horne, R.H.A. has decided to give a collection of his pictures and sketches to form the nucleus of such a gallery.

NATURE STUDY.—The "Times" publishes a letter from one of the most active promoters of "Nature Study" in England, Mr. J. C. Medd, of Stratton, in which, following up a suggestion of Count Plunkett's, he proposes that the Nature Study exhibits in the Bath and West Agricultural Show (to be held in May) should be transferred en bloc from Bristol to the Greater Cork International Exhibition. Nature Study is already recognised in England as a very important factor in popular education.

WALKER ART GALLERY, LIVERPOOL.—Councillor J. R. Grant of Liverpool has presented to the Walker Art Gallery a picture by Robert Fowler, R.I.—"Sleeping Nymphs Discovered by a Shepherd." The picture was exhibited at the Royal Academy last year, and later in the Autumn Exhibition in Liverpool. The permanent collection will now contain three of Mr. Fowler's figure paintings. The other two are "Ariel," purchased by the corporation in 1890, and "Eye and the Voices," purchased in 1894.

PREHISTORIC IMPLEMENTS.—Professor Windle has succeeded in obtaining for the Birmingham University a collection of stone implements, which includes as many as five or six thousand specimens. He has received most welcome contributions from Mr. Freer, a member of an old Birmingham family, who was for many years a missionary in North America. Mr. Freer has sent numerous specimens illustrating the work of the North American Indians. Another large collection, made up of neolithic implements, has been given by Sir John Holder, Bart.

PROPOSED PUBLIC LIBRARY AND MUSEUM FOR KINROSS.—Mr. Hew Morrison, principal librarian of Edinburgh Public Library, addressed a meeting of the ratepayers at Kinross on free libraries, when Provost Cumming presided. A number of questions having been asked the following resolution was unanimously passed:—"That this meeting of the ratepayers of the parish of Kinross request the town council and parish council to approach Dr. Carnegie for a grant towards the

establishment of a public library in Kinross." It is proposed to house the museum left to the town by the late Mr. Marshall, F.S.A., in the building.

GLASGOW ART GALLERY AND MUSEUM, KELVINGROVE.—The art collections in the Kelvingrove Gallery have just been further enriched by the receipt of the Macdonald cabinet of pictures. These works were assigned to the corporation by the late Bailie A. G. Macdonald, subject to the life-rent of his wife, who died recently. Previous to the execution of the deed of assignation Bailie Macdonald consulted Sir George Reid and Sir Francis Powell as to the pictures in his collection which might be regarded as worthy of a place in the art gallery of the city, and under the advice of these experts the twenty-three works now shown in the galleries were selected and specifically assigned. The pictures embrace, in addition to a large composition by Pietro da Cortona, landscapes by Horatio M'Culloch, J. Milne Donald, and W. L. Leitch, and figure subjects by James Sant, Robert Herdman, and William Gale, but the principal feature of the gift is the fine series of water-colours by Sam Bough, among which are some of his most brilliant efforts, whilst others have great and increasing local topographical interest.

BIRMINGHAM ART GALLERY—GIFTS OF PICTURES.—A collection of drawings and studies have just been presented to the Birmingham Art Gallery by the Right Hon. Wm. Kendrick, Mr. C. A. Smith-Ryland, Mr. John Feevey, Mr. George Colmore, and Mr. J. R. Holliday. The collection comprises about 260 drawings, studies, and sketches by Dante Gabriel Rossetti, 226 by Sir Edward Burne-Jones, a portrait in pastel by Ford Madox Brown, a portrait by Frederick Sandys, and a water-colour drawing by G. P. Boyce. A large number of the drawings and studies require to be mounted and framed. This work is being proceeded with, but it will be some little time before the collection will be ready for exhibition. Mr. John T. Middlemore, M.P. has also presented the series of four pictures by Sir Edward Burne-Jones, known as the Pygmalion Series. These magnificent gifts will perhaps stimulate the corporation of Birmingham to proceed with the much-needed extensions to the gallery, or better still erect a fresh building on a more suitable site, for the present rooms, with their conflicting lights, disfiguring iron staircases and galleries, and the absence of architectural proportion are quite unworthy of that great enterprising city.

MEMENTOES OF MR. CHAMBERLAIN'S TOUR AT BIRMINGHAM ART GALLERY.—The gifts and mementoes brought home by Mr. and Mrs. Chamberlain from South Africa are now

exhibited in the Birmingham Art Gallery. In the collection there are sixteen illuminated addresses, enclosed in gold and silver and other caskets, presented to the Colonial Secretary at various points of the journey. Amongst the more remarkable of the curios may be mentioned a clock ingeniously fashioned from Boer shell and spent cartridges fired into Mafeking; an illuminated address from the corporation of Kimberley, enclosed in a wooden casket made from the platform of the Boer "Long Tom" which bombarded Kimberley; and an exploded shell fired from one of the big guns which besieged Ladysmith. Another curio, to which the right hon. gentleman is said to attach much value, is a framed testimonial inscribed on a piece of parchment cut from the drumhead of the Good Hope. This is the "freedom of the sea," which was presented to Mr. and Mrs. Chamberlain by Father Neptune on crossing the Equator. Attached to the casket are the ribbons cut from a cup of the "noble Order of the Bloater," conferred on Mr. Chamberlain, and the "high Order of the Sardine," conferred on Mrs. Chamberlain. Much interest also attaches to a plume of ostrich feathers presented to Mrs. Chamberlain by the chamber of commerce at Port Elizabeth, and a silver gilt model of a gimricksha from the ladies of Durban; and a specially prepared badge in gold, diamond, sapphires, and rubies, presented by the loyal women of South Africa at Pretoria.

Birmingham Museum and Art Gallery.—The Museums and School of Art Committee's report was presented to the city council in May. The total number of visitors throughout the year ending December 31st last was 511,720, which represented a substantial increase of 50,229 over 1901. Since the opening of the gallery on December 1st, 1885, 11,615,131 persons have passed the turnstiles. The average weekly attendance last year was 9,840, the average daily attendance (including Sundays) 1,413, and excluding Sundays, 1,506; the total Sunday attendance was 44,701, and the average Sunday attendance 859. The committee report that during the progress of the experimental lighting of the long gallery with electricity, reported to the council in 1901, permission was given to the gas committee, at their request, to try the effect of lighting the room with a new form of gas burner. It was found on the completion of the experimental lightings that this gallery was far more effectively lighted with gas under this system than it could be with electricity. In order to dispose of an objection that is sometimes made that the use of gas in the galleries may be prejudicial to the pictures exhibited, the committee asked Dr. Frankland, F.R.S., of the University to examine and report on the condition of the atmosphere of

the gallery, both when lighted with gas and with electricity. This he most kindly undertook to do without remuneration, and the committee are greatly indebted to him for the patient and exhaustive enquiry which he made, and for his valuable report showing that incandescent gas illumination is preferable to arc electric lamps. Late in the autumn it was found to be necessary to discontinue the use of the gas engine and dynamo hitherto used in connection with the electric lighting of the round gallery, both being probably beyond repair. The electric supply department has temporarily provided the necessary apparatus for lighting this room, the supply being taken from the mains of the department. It will be necessary during the coming year to provide for the permanent lighting of this room and of the long gallery, and for the improvement of the lighting of the other galleries now required by the increasing number of objects exhibited and of space utilised. The committee have under consideration estimates of the cost of lighting the galleries, either with gas or electricity. As it became apparent on the conclusion of the experimental lightings and on the receipt of Dr. Frankland's report that the long gallery must at least be lighted with gas, the committee, with the view of avoiding the difficulty of having two systems of lighting in the building, asked the trustees of the late Mr. Nettlefold whether they would, under the altered circumstances, waive the condition on which Mr. Nettlefold's gift of the collection of pictures by David Cox is held, that the round gallery shall be lighted with electricity. The trustees have informed the committee that they cannot waive this condition. Provision will therefore have to be made in the estimates for the lighting of the round gallery with electricity, to be supplied from the corporations mains, and for such lighting of the other galleries as may be found to be required after the various estimates which have been received have been fully considered.

FISHERIES RESEARCH.—The report of the committee appointed to inquire and report as to the best means by which the State or local authorities can assist scientific research as applied to the problems affecting the fisheries of Great Britain and Ireland has been issued in the form of a Blue-book. The report is divided into practically four sections, as follows: (1) constitution and powers of sea fisheries authorities in the United Kingdom; (2) problems to be investigated and methods requisite for their solution; (3) authorities for conducting and controlling investigations; and (4) a fishery museum. In view of the report of the Royal Commission on Salmon Fisheries recently issued, as well as that of the Viceregal Commisson, which made recommendations relating

to the inland fisheries of Ireland, the committee does not consider it desirable to go into the question of scientific research with regard to inland fisheries. It feels that its recommendations can be made applicable to such fisheries if due regard be paid, in constituting the Fishery Council for England, to the selection of one or more representatives interested in the salmon fisheries. Among other recommendations the committee is of opinion that benefit would be derived from the establishment of a national fishery museum, which had best be placed at a great fishing centre, such, for example as Grimsby. In this museum might be exhibited such of the specimens of the Buckland collection as are worth preserving, and perhaps it may be found possible to apply Mr Buckland's monetary bequest for the purposes of such a museum, which might very appropriately be united with the proposed laboratory for the east coast.

THUMB SIGNATURES.—In view of the close attention that has been directed recently towards the subject of successful art forgeries, chiefly through the grave doubts thrown upon the genuineness of the famous Tiara of Saitaphernes in the Louvre, and the statements of Mr. John MacWhirter, R.A., on the subject of extensive frauds upon private collectors, special interest attaches to a device for securing authenticity which has been adopted by the eminent Birmingham painter, Mr. W. J. Wainwright, A.R.W.S. His idea depends upon the well-known fact, discovered originally by the Chinese and now commonly used in the identification of criminals, that the thumb prints of any two individuals show distinct and recognisable differences in the convolutions produced by the grain of the skin. These convolutions, moreover, form a pattern which is unchanging, and would present almost insuperable difficulties to the forger, and the suggestion is that living painters should safeguard future purchasers by imprinting a thumb signature close to the ordinary signature whilst the work is still wet. As a case in point, the *Liverpool Daily Post* tells a good story on the subject. It concerns a Birmingham millionaire, who "took to art" in his rich old age, and became a source of wealth to more than one smart dealer. He bought a "Turner" for £700, a fine landscape—river scene, old one-arch bridge, ivy-clad, luxuriant "banks and braes," &c. The puzzling problem among the Brummagem art critics was not the genuineness of the "Turner," but whether it was a work of his "early period," his "middle period" or his later, and there was much learned discussion on the point. The buyer gave a dinner to the "critics" and some of his friends, and had the whole question threshed out, and well "washed down." One guest, Mr. Henshaw, a good landscape

artist, said nothing, but looked grimly on. At last he was appealed to. His answer was decisive. "Gentlemen," he said, "if you carefully examine the boulder stone under the arch, you will see the letters 'F. H. H.,' my initials. I painted that picture when I was a student, in imitation of Turner's style!" The company looked, and found the letters "F.H.H." Tableau!

LONDON LOCAL MUSEUM.—A writer in a London suburban paper puts forth the following plea for a local museum for North London. One of the educational facilities that North London lacks is the use of a local museum of science and art. Should the residents of North London desire to study a collection of the fauna and flora of the British Isles, or any works of art in which they may be interested, they must travel many miles to the western part of London to do so. And this is not as it should be, for such an educational centre as a museum should be within easy access, both in distance and time, of the whole of the population of a certain size. West Ham has bestirred itself, though one of the poorest districts in London, on behalf of her working-class population in this direction. Whitechapel and Bethnal Green also possess such institutions; Brockley, by the munificence of Mr. Horniman, also possesses one of these institutions, and surely North London, with its many wealthy residents and public men, can bestir itself, and by a joint effort establish a "local museum" for the "teeming population of this northern suburb," which shall be a credit to the locality. A museum, to be of any great service, should be open at such hours that the working man—if his studies lead him in that direction—shall be able to have free access to the collections stored therein.

THE CHEYLESMORE COLLECTION, BRITISH MUSEUM.—Since the bequest of the late Lord Cheylesmore was handed over to the trustees of the British Museum at the end of last November, the officers of the department of prints and drawings have had time to examine and sort the entire collection, and to make progress in the work of cataloguing and incorporating it with the general collections of the department. The collection consists of two divisions, one of English mezzotint portraits in general, the other of portraits of Royal personages (chiefly Queen Victoria and her family) in various modes of engraving. The main mezzotint collection numbers 7650 pieces, the miscellaneous portraits of Royalty 2675. From the point of view whether of art or of the market, the former is by far the more valuable part of the bequest. It represents the work of 284 English and 70 foreign engravers, and includes a very large proportion of the rarest and finest

examples of the art. Lord Cheylesmore had been collecting mezzotints for nearly thirty years before his death. He had begun with the primary aim of illustrating English history, and of securing examples, in no matter what state or condition, of all, or as many as possible of the mezzotint portraits of our nation that were catalogued or otherwise known to exist. To this desire was added by degrees an interest in the art of mezzotint for its own sake, leading the collector to enrich his cabinet at great cost—though at less than a quarter, commonly, of what would be the cost to-day—with the finest examples in specially selected proof or early states. Throughout the collection the proportion of choice and well preserved to poor or injured prints only interesting as portraits is about one to six or seven; and the ratio is fortunately much the highest among the works of the accomplished craftsmen contemporary with Reynolds, Romney, and Gainsborough. The addition to the artistic treasures of the museum in fine and well preserved examples of men like M'Ardell, J. R. Smith, Valentine Green, the two Watsons, Dixon, John Jones, James Walker, Gainsborough, Dupont, Dickinson, Hodges, William and James Ward is enormous: and the total number of choice prints selected from the rest for separate treatment will amount to 1200 or upwards. Among the remainder many, though of small importance artistically, are of great interest, as helping to complete the museum collection of portraits. Mezzotints are the most delicate and easily damaged of all forms of engraving, and the most liable to injury from rubbing, creasing, or damp. To protect Lord Cheylesmore's great bequest as is its due, and put it into proper condition for use by students and visitors in the print room, much labour is needed in the matters of repair, preparation, and mounting. This task is now being actively carried on, in the most finished and substantial manner for the choicer portion of the collection, in a simpler but none the less effectual form for the rest. To complete the task must take another twelve or fifteen months at least. Next year it is the intention of the trustees to place on exhibition in the public gallery of the department a selection of some 500 or 600 of the latest examples from the Cheylesmore collection in historical order, and to supplement them, where it is needed, from the very fine, although far from complete, collection in the same kind which was previously the property of the museum. It is safe to predict that an exhibition of mezzotints drawn from these two combined sources will be one such as could not possibly be equalled elsewhere for either age or quality.

ABROAD.

NATIONAL MUSEUM, STOCKHOLM.—The Art section of this museum has hitherto been open on five days of the week, from 11 a.m. to 3 p.m., and on Sundays from 1 till 3 p.m. In future, from 1st March till 1st October of each year, the hours of opening are to be extended till 4 p.m.

GENEROUS ART GIFT TO FRANCE.—The painter H. W. Mesdag has just given an unusually rich gift to his country, namely, the whole of his collection of pictures and art objects, and the house in which they are preserved. The pictures alone number over three hundred, and include fine examples of Daubigny, Corot, Millet, Rousseau, Israels, the two Maris, and others. The collection will henceforth be open to the public, though the artist retains personal control over it until his death.

USEFUL INFORMATION.—The Paris municipal council has just voted a credit of three thousand francs for the creation of a municipal bureau of scientific information for foreigners. Paris is annually visited by numerous foreign scientists, professors, and doctors. Many of them are desirous of making professional inquiries or studies; but as they visit the capital at holiday periods, the heads, or competent persons connected with the various departments, museums, collections, and libraries are often away. These gentlemen are thus deprived of opportunities of studying French scientific methods, and it is to remove these difficulties that the bureau will be created. A competent linguist will be placed in charge of it, whose duty it will be to reply, verbally or by letter, to the inquiries which may be made by foreign scientists and others.

RARE POTTERY.—One of the most curious and rare articles in the Dutuit collection in the Petit Palais, Paris, is an earthenware candlestick bought by the co lector for 91,000fr. A piece of ornamental clay which cost such an enormous sum naturally draws the public to it in open-eyed wonder and surprise. "The *bibelot* may be pretty, but in itself it is not worth a far smaller figure. There must be some mystery connected with it. What is it?" Such are the remarks made by visitors. For a long period there was a mystery attached to the kind of ware of which the candlestick is an excellent specimen. Some fifty or sixty years ago there was on sale in France a singular class of faïence about which no one knew anything definite, and it went under the name of the "Sphinx de la curiosité." Some said that it came from Italy, others declared it was made in England. Few supposed it was of French origin. It was generally understood to be of the time of Henry II. of France. A well-known authority having

compared the ware with a drawing of an earthen bottle which figured in a book, "Livre d'heures," that had been in the possession of Claude Gouffier, châtelain d'Oiron, came to the conclusion that he had discovered the secret of the "Sphinx." The story he told was very pretty. The widow of Artus Gouffier, once a governor of Francois I., to beguile the weary days of her widowhood took a great interest in intellectual and artistic matters. Acquiring a knowledge of the art of pottery she passed her leisure moments in making clay cups and candelabra. From the date of this little history the ware was known as the "faïence d'Oiron." Another gentleman, M. Edmond Bonnafé, well versed in ceramic art, however, found mentioned in an inventory made at the Château de Thouars after the death of Francois de la Trémoïlle two cups and two salt-cellars in Saint-Porchaine clay. These articles again appeared in an inventory written forty years later at the same castle. This set the specialist thinking. The cups and salt-cellars must surely be precious else they would not be handed down as heirlooms from father to son. Investigation showed that most of the so-called Oiron pottery came from the Château de Thouars, and that it did not bear the arms of Gouffier, the alleged producers, but those of families allied to the Montmorencies, who were lords of the land where Saint-Porchaine was situated. Thus the legend of the artistic widow has been disproved, and, as a Paris newspaper says, the truth is that the ware was the work of an unknown potter of fine taste, who had thought of applying to still soft earth models in metal or in wood and then filling the *creux* with coloured clay, afterwards sticking on ornaments prepared beforehand, and baking and varnishing the pottery.

Schools and Museums.—At a recent meeting the New York Society of Biology Teachers discussed "the public scientific institutions and the school system," and various officers of these institutions described what was being done for the help of teachers and students. Thus at the American Museum of Natural History, certain of the collections had been, said Dr. Bumpus, directly planned for this purpose, and rendered more available for instruction by the issue of guide-leaflets; rooms and a working library had been set apart for the use of teachers and students. Public instruction might be served if the exhibits were arranged to illustrate matters of current interest. Dr. N. L. Britton explained the advantages of the New York Botanical Gardens, such as trips under the guidance of an official, the permanent microscopic exhibit, the arboretum, the museum and public lectures, and hoped that later some plant-material might be furnished free to the board of education. "At the New York Aquarium," said Dr.

Townsend, "material and salt water aquaria were already reserved for the high schools, and the building was closed to the public for two days in the week to allow classes from the schools to work in quiet." Dr. A G. Mayer described what the Brooklyn Institute of Arts and Sciences was doing for the schools and also gave his ideals of a children's museum which should be incorporated in the museum. A committee was appointed to endeavour to obtain, so far as possible, the fullest co-operation between the public institutions and the city schools.

MUSEUM OF FINE ARTS, BOSTON, U.S.A.—This museum has just commenced the issue of a Bulletin which states in its introduction that "Should it prove acceptable it will be published at intervals hereafter until further notice, its purpose being to keep our annual subscribers and others who are interested informed of what is being done in the museum, to call their attention to new acquisitions, and to show them, in brief and convenient form, where objects recently purchased may be found." Then follows a short description of a series of special exhibitions, a list of the officers, terms of admission, rules, &c, and a guide to recent additions. With the first number is issued plans of the museum, which appears to be a well-organised, convenient, and commodious institution. As the Boston Museum of Fine Arts has recently become a member of the Association, we may, at some future time be favoured with a full description of the museum.

Australian Museums.

THE following list of Australian Museums has been kindly supplied by Mr. Bernard H. Woodward, F.G.S., Director of the Western Australian Museum and Art Gallery:—

The Australian Museum, Sydney, N.S.W., R. ETHERIDGE, Jn., Curator.

Madeley Museum, University, Sydney, N.S.W.

National Art Gallery, Sydney, N.S.W., G. E. LAYTON, Secretary.

Geological Survey Museum, Sydney, N.S.W.

National Museum, Melbourne, Victoria, Prof. W. BALDWIN SPENCER, Director.

National Gallery, Melbourne, Victoria, L. BERNARD HALL, Director.

Botanical Museum, J. J. LUEHMANN, Curator.

Queensland Museum, Brisbane, Q., C. W. DE VIS, Curator.

Agricultural Museum, Brisbane, Q.

Geological Survey Museum, Brisbane, Q.
Government Geologist Museum, Brisbane, Q.
Queensland National Art Gallery, R. GODFREY RIVERS, Curator.
Museum of South Australia, Adelaide, S.A., Dr. E. C. STIRLING, C.M.J., Director.
Art Gallery, Adelaide, S.A., H. P. GILL, Curator.
Technological Museum, Adelaide, S.A., S. HUGHES, B.Sc., Curator.
The Western Australian Museum and Art Gallery, Perth, W.A., BERNARD H. WOODWARD, F.G.S., Director.

NOTE.—There are Technical Museums in Sydney, N.S.W., and in Ballarat, Victoria.

Correspondence.

To the Editor of *The Museums Journal*.

A Correction: Bolton Art Gallery.

On page 305 of the "*Journal*" for April, in the note on the new art gallery for Rochdale, that town is congratulated "on adding its name to a list which now includes almost all the leading Lancashire towns, with the exception of Bolton and one or two other places." The writer of the note must surely not be well acquainted with the N.W. of England, or he would have known Bolton has had an art gallery for upwards of twenty years, and that the Mere Hall has been exclusively used for art exhibits since 1890. As we have attended the Association's conferences from the time of our first York meeting, and sent copies of our annual reports to the Hon. Sec., it seems strange that it should be necessary to make this correction.

W. W. MIDGLEY, F.R., Met.S.,
Curator.

Public Museums, Bolton,
25th April, 1903.

[The paragraph referred to was contributed, and we had no personal acquaintance with the Art Gallery of Bolton. We need hardly say there was no desire to do any injustice to Bolton, and trust this letter may be the means of making its art treasures better known.—Ed.]

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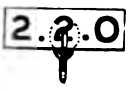

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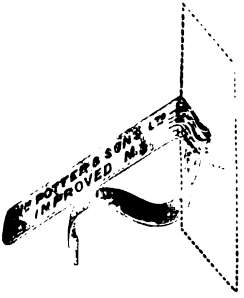

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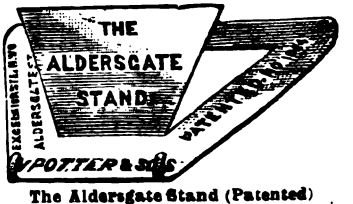

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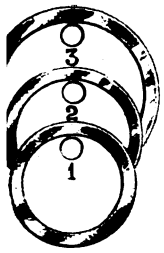

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The Chantrey Bequest and How it is Administered.

From the Daily Chronicle, May 12th, 1903.

IT has been generally recognised that Mr. D. S. MacColl, in a recent number of the *Saturday Review*, performed a useful service by drawing attention to the manner in which the Chantrey Fund has been, and is being administered by the trustees, who are members of the Royal Academy. But the most powerful comment on Mr. MacColl's comments, since these were published, has been the action of the trustees themselves.

Briefly, the Chantrey Bequest consists of a large sum of money left by the late Sir Francis Chantrey, a member of the Academy, for the purchase of works of art. The right to dispose of this money is vested in trustees, who also are members of the Royal Academy. Chantrey died in 1841. An abridged version of the text of the will of Sir Francis Chantrey is contained in the Appendix to the Parliamentary Report of the Commission of the Royal Academy, Vol. 27, Appendix No. 9. It is briefly as follows: Chantrey left everything to his wife in trust during her life, or until her second marriage, save a few legacies to maintain his tomb, bequests to schools, &c. On her death, or second marriage, all his income was to be devoted to the "encouragement of British Fine Art in Painting and Sculpture only," consisting of works of the highest merit either already executed or that may be executed by artists of any nation, provided they have resided in Great Britain during the executing and completing of such works. But they may be the works of deceased artists. He repeats

again that preference is to be given to the works of the "highest merit" that can be obtained, the prices to be liberal, and wholly at the discretion of the president and council of the Royal Academy. But the president and council shall have regard "solely to the intrinsic merit of the works in question, and not permit any sympathy for the artist or his fame . . . or circumstances to influence them." Nowhere is it stated that these works must be exhibited in the Royal Academy. "And if the Royal Academy be dissolved, or ceases to act for the purposes aforesaid," the trustees of his will for the time being—there shall be five of these, including the President and one other official of the Academy—"shall endeavour to obtain the sanction of Parliament to some proper scheme for the future application of the annual income." These are virtually the conditions of the Bequest as published in the Parliamentary Report. The amount of the bequest is not stated. It was not known. But even in 1863, Sir Charles Eastlake, before the Commission, estimated that the income would amount to £3,000 a year. There is a vast mass of details referring to the carrying out of the will, filling some pages of the Appendix, even there in a condensed form. But the above are the main facts. The purchase of pictures was not commenced until 1877, after the death of his widow. Since that time, up to, but not including, the present year, the enormous sum of £60,064 10s. 0d. has been expended on a hundred and one works of art, an average of nearly £600 each. Certainly, when one considers the figures paid by Continental galleries for modern pictures, it is an amazingly liberal allowance. And the comparison is fair, for the collection of pictures bought with the Chantrey Fund, and exhibited permanently in the Tate Gallery, is the only public collection of modern pictures in London, though Chantrey never intended it to be wholly modern. In fact, it is a national affair, as he wished; house-room is given it in a gallery whose director is paid by the State, Sir Edward J. Poynter, who holds this position, being also the director of the National Gallery, as well as one of the trustees of the Chantrey fund.

Now, ever since the formation of this Fund, the trustees, who it must be remembered have always been the president

and one other official of the Royal Acadamy, aided, as judges, by the president and council of the Academy—that is, the same persons, with additions—have, it is suggested through ignorance of the terms of Chantrey's will, expended the income of the enormous sum at their disposal, which amounts to some two or three thousand a year, mainly on artists who were already members of their own Academy, or who shortly after the purchase were made members. Not only this. The pictures purchased have been usually chosen from those exhibited in the Royal Acadamy—their own Academy. Of the sum total of sixty thousand pounds, thirty thousand have gone to the members of the Royal Acadamy; between seventeen and eighteen thousand to those who shortly after became members; and only between twelve and thirteen thousand to outsiders. That the Royal Academy should profit to a certain extent is only according to the terms of the will, for the president draws a salary of three hundred pounds a year, and the treasurer of the fund draws a salary of fifty pounds a year. But that they and their fellow Academicians should profit still further by the preference given to their own works for purchase, hardly seems to have been Chantrey's intention, unless these works are of "the highest merit." It is true that the trustees, in their administration of the fund, have acted as though the work selected must be by British artists who are living, that it must have been executed, or at least exhibited, in the year of purchase, and at the Royal Academy. But to consult Chantrey's will is to learn that the works may be by artists of any nationality, provided they have been executed in Great Britain. The works of deceased artists may be purchased. There is no limit as to exhibition in the year of purchase, or to exhibition at the Royal Academy of Arts. It will, therefore, be seen that for years, the president and council of the Royal Academy have interpreted in curious fashion the Trust confided to them. This year, moreover, they cannot have erred through ignorance. For they can now no longer be unaware of the terms, as these have been so clearly pointed out to them, and yet within a few days, they have purchased four works of art from their own galleries, three by their own members, which, by no stretch of imagin-

ation, can they pretend to say are even the best things exhibited this year, even at Burlington House. But this is only one example of the Academy's fashion of ignoring the artistic opinion of the country. Besides these three works by members, a fourth is said to be under consideration, for as they purchased nothing in 1902, they probably have a good deal of money in hand. In 1901 also, they purchased three works by their own members, or men who have since become members. Indeed, there is a popular superstition, with some foundation in fact, that purchase by the Chantrey trustees is a prelude to election to the Academy, For of the hundred and one works purchased up to the beginning of this year fifty-eight are by men who were at the time or soon after became members of the Academy.

This statement, however, gives no idea of the amount spent by the members of the Academy on themselves, or of the number among them who have sold to the trustees more than one work, or of how many of the works were shown in the Academy. It is almost incredible when one comes to look into the figures. The list is headed by Lord Leighton, two of whose works were purchased during his lifetime from his own Academy walls, one during his presidency when he was trustee and administrator of the Chantrey fund, and the other the year before his election as president; for these two works he obtained the sum of £3,050. The next highest figure was awarded to Professor Hubert Von Herkomer, and amounts to £3,000. He also was a member of the Academy. Mr. Thomas Brock, member of the Academy, obtained £2,200 for one contribution alone; £2,000 went to the late Vicat Cole, Millais, Mr. Orchardson, and Mr. Frank Dicksee—on Mr. Dicksee altogether there has been spent £2,367. 10s. 0d., two thousand of it, since he became a full Academician. What any of these works would fetch in an auction room—except possibly the Orchardson—their authors would probably not be desirous to learn. As a matter of fact, during the ten years following the purchase of his picture by the Chantrey trustees, the largest price a painting by Vicat Cole brought in a public sale was £850. This was pointed out in *The Daily Chronicle* in 1899. To take lesser sums of only a thousand, or a little over; Mr.

W. F. Yeames has received £1,000; Sir E. J. Poynter, £1,000; Mr. Hamo Thornycroft, £1,000; Mr. G. F. Watts, £1,200; Mr. W. L. Wyllie, £1,120; Mr. John Pettie, £1,000; Mr. J. C. Hook, £1,100; Mr. P. H. Calderon, £1,260; Mr. Harry Bates, £1,000; Mr. Briton Rivière, £1,200; Mr. C. Napier Hemy, £1,200; W. Hilton, £1,000 All these men were or are members of the Academy. But it is curious that while the picture by Hilton was purchased by the Chantrey trustees for £1,000, a better picture by him fetched at auction £179: that while Mr. Briton Rivière's picture cost the Chantrey trustees £1,200, his "Sympathy," also in the Tate gallery, was secured by a private buyer for £273; that while Mr. Calderon received from the Chantrey Bequest £1,260, another and more important picture by him was sold, under other conditions, for £280. Among outsiders, only one man has received any such sum, a Mr. Henry C. Fehr, who got £1,200 in 1894. No other outsider has received as much as a thousand pounds, save Mr. Napier Hemy, who was paid £1,200, and he was soon after elected to the Academy. But this is not all. Two works by Leighton have been purchased, two by Mr. Dicksee, two by Mr. H. B. W. Davis, two by Mr. W. L. Wyllie, two by Mr. David Murray, two by Professor Hubert Von Herkomer, two by Mr. Ridley Corbet, two by Mr. W. R. Colton (including this year's, the first having been bought in 1899), while the trustees are said to be considering the purchase for £2,000 of another work by Mr. Napier Hemy, upon whom they have already expended—in 1897—£1,200. The only outsider from whom two pictures have been purchased is Mr. Adrian Stokes, who was paid £400 for the first, a much higher rate probably than the average awarded to non-members, for one of whose contributions as little as twenty-one pounds was given. It is rumoured that Mr. Stokes is to get £300 this year, a quarter of what Mr. Herkomer received for his two.

If this fund had been left by Chantrey for the benefit of Academicians, and the encouragement of deserving outsiders who shew in the Academy, no one would say it was not perfectly administered. But it seems, on the contrary, that the fund was left for the purchase of works of art of the highest

distinction to be obtained, provided they were executed in Great Britain, without reference to the time at which they were produced, or the place where they were exhibited, or the official standing or nationality of the artists who produced them. It is this fact that makes the selection of pictures hitherto so open to criticism. What Chantrey wanted to present to his country, judging by his provisions to secure it, was a national collection of the finest painting and sculpture, and not a collection of Academically recognised art. Knowing, therefore, the conditions of Chantrey's bequest, knowing the sums that have been spent in endeavouring to fulfil the terms of Chantrey's will by the trustees, it becomes interesting to note whether the best use has been made of the money, whether purchases have been made from the most distinguished artists, and whether the Chantrey collection does or does not contain the finest works of art that have been produced in Great Britain. Now, when it is considered that, in 1877, the year of the first purchases and of an expenditure of over five thousand pounds, all the Pre-Raphaelites—that is, Rossetti, Millais, and Holman Hunt—were alive, and that there is not a single work by any one of them in the collection, save an uncharacteristic example of Millais, of little artistic value, purchased for £2,000 in 1895, when he was old and ill; when it is considered that Ford Madox Brown has no place, nor Burne-Jones, though one of his followers has; when it is considered that there is no sculpture by Alfred Stevens or Mr. Alfred Gilbert; when it is considered that Fred Walker, Mason, and Cecil Lawson were passed over; when it is considered that there are no pictures by Mr. Whistler or Professor Legros, M. Degas, or Matthys Maris, though all four come within the conditions, and that there is only one Sargent, for which the sum of £700 was paid, though there are two Herkomers, for which £3,000 were given, to represent the work of foreigners residing in England; when it is considered that there is not a single example of the great masters of the early British school, from Hogarth to Turner, though every one of them is eligible; when all these things are considered, it becomes evident that something, besides the generally accepted canons of art, has governed the actions of

the trustees of the Chantrey Bequest, and that it is high time a Parliamentary or judicial inquiry was made into the administration of the fund. For it is useless to say that the pictures by Mr. Adrian Stokes and Mr. David Murray and the sculpture by Mr. Armstead and Mr. Colton represent the highest form of British art exhibited even in the Royal Academy at the present moment. All these artists have shown better work, and if Messrs. Murray, Stokes, and Colton are of such importance that each must have two works in the Chantrey collection, while Mr. Whistler and Mr. Gilbert are still excluded, at least there should be the excuse of an effort to secure their masterpieces. It is even more useless to suggest that the paintings represent the best examples of British landscape art now obtainable, while certain other exhibitions remain open. Such a choice demands an immediate official inquiry into the efficiency of the trustees. Were they trustees of private funds, this inquiry would have been not only demanded, but held in a court of law long ago. It would be interesting to find out, and it must be found out, if there are still five trustees to Chantrey's will, three of whom are either his executors or their executors. It would be interesting to know, and it must be known, whether the president and the council of the Royal Academy, at whose discretion solely works of art are purchased for the Chantrey collection, think that during their administration—let us take this year only—they have obtained the works of the highest merit that can be obtained at liberal prices, works produced in Great Britain without any limit of time. If they honestly think so, they are lamentably ignorant. If, knowingly, they have purchased works which every intelligent critic, artist, or collector knows are not of the highest merit, they have—since Mr. MacColl's article appeared, before the Academy opened, and therefore, presumably before the purchase—broken the conditions of Chantrey's will, and Parliament should be asked to carry out the provisions in it to frame some proper scheme for the application of the annual income.

Burnley Art Gallery.

HAVING on Tuesday night taken a principal part in the the inauguration of Burnley's new Chamber of Commerce, the Earl of Rosebery, on May 20th, formally opened Towneley Hall, Burnley, Lancashire, as a municipal art gallery and museum. The old home of the Towneleys, together with sixty-two acres of the surrounding land, recently passed by purchase into the hands of the Burnley Corporation. The park is to be used as a place of recreation for the people, and has indeed been so used since June last. The quaint stone hall will be converted into an art gallery and museum, in which it is hoped in course of time to house a collection of pictures and objects of interest that will be worthy of the town. At present the main hall and the south wing of the hall are filled with a loan collection, and the Art Gallery which Lord Rosebery opened on May 20th is, in reality, merely the shell in which Burnley's future art treasures will be contained. At least a portion of the hall which has now become the property of the borough of Burnley dates back to the reign of Edward III., and it is regarded as one of the most important mansions of the quadrangular form in the North of England. Until about 200 years ago the buildings formed a complete quadrangle. In 1700, however, the old front, in which were contained the chapel and library, was removed, and rebuilt near the north wing. Through the public spirit of Lady O'Hagan the Burnley Corporation have been able to acquire this interesting relic of ancient Lancashire and preserve it for all times.

In declaring the Hall open Lord Rosebery said: "The last time I stayed here was as the guest of Colonel Charles Towneley, when my hostess was the charming young lady who is now Lady O'Hagan, and it is a strange leap in life to return to this ancient hall where one has been the guest of a family and to find it dedicated no longer to private, but in a sense to public hospitality. And in another sense I have a more melancholy association with Towneley in that I was the close and intimate friend of Richard Towneley,

who, had he lived, would have inherited this place, and who often spoke to me of the enjoyment that he hoped to find in living here. But it was destined otherwise, and his life was prematurely cut short, and with him the name of Towneley came to an end. Well, then, that being so, it does seem to me that that honoured name having ended in the main line and the memorable traditions of this house being extinguished, that it is well, and it is fitting—in view of these facts and in view of the fact that you of the borough of Burnley have embraced and encompassed this hall with your population and to some extent with your atmosphere, that this house should become consecrated to public uses for the borough of Burnley, where the name of Towneley has been honoured for so many centuries. There is one great advantage in that view, which is that the old hall will always be preserved, and that there is no fear in coming generations of the rapacious hands of the business builder, the wrecking builder, being employed on the devastation and the renewal of this most interesting and historical site. And there are some connections with Towneley which seem to make it peculiarly appropriate as an art gallery. I think if the place were haunted—and it is old enough to be haunted—you would find some encouragement for your enterprise in the phantoms that you would find here. There would be some Jacobites, and one very distinguished one, and he would be, I believe, an encouragement to the study of the history of your country—the antiquary Christopher Towneley, a man of great eminence, who will, I trust, be the presiding genius over the collection of antiquities which I hope may some day form a department of this Museum. And, last and greatest of all there would be the phantom of Charles Towneley, whose great collection of ancient marbles forms so vital a part of the collection of the British Museum.

"Now I think, if I may say so, that the prospects of this museum, though they begin with only one picture, and that a portrait, are not so poor as that simple statement of fact would lead you to think. I believe that for some time to come you will have to limit yourselves to loan exhibitions, for which there is ample material in the country, and which may fill

your walls until you have freehold works of art of your own. But the tendency of the day is largely I think among citizens of localities to contribute so far as they can, either in their life or at their death, to the embellishment and the ennobling of the places where they have lived and where they have made their fortunes, and there is a much abused feature of our State polity which I think will have a considerable influence in the same direction—I mean the death duties. The death duties punish everybody, and harass everybody, and annoy everybody; and from that point of view they are what Napoleon would have called an efficient tax, because he reasoned that taxes must be efficient of which everybody complained. But at any rate I believe they will have this effect in the future, that people who are much attached to works of art which belong to them, and which they fear may be dispersed at their death and may go to the countries of whose wealth and enterprise we are sometimes jealous as regards the acquisition of works of art, are more likely than in the past to bequeath them to public museums and galleries, so that at any rate they may be sure that these works which they have valued in their life will not leave their country or neighbourhood at their death. Well, that is a practical encouragement to the museum of Burnley. It may even be a hint to some who are about to make their wills. But whether your Gallery is to be swollen by accretions of this kind, or whether it will be from the voluntary altruism of distinguished benefactors in the neighbourhood—I do not suppose that the rates are applicable to the purchase of objects of art for a gallery of this kind—(the Mayor: No);—if they are not it is almost the only purpose for which the rates are not available—(laughter),—from whatever source it may be from which this Gallery may be recruited, I have sufficient faith in the local patriotism of of this neighbourhood, and of Lancashire at large, to foretell for this ancient hall a new and beneficent life as a public museum; and it is with that hope and in that spirit that I declare it open to-day."

Lord Rosebery appears to have the opinion that works of art cannot be purchased out of the rates for a municipal art gallery, and this opinion is evidently shared by the Mayor of

Burnley, judging by his interjectory remark. It may be as well to inform this eminent legislator, and also the civic ruler, that their opinions are not in accord with general practice, and if Lord Rosebery would consult some of the Law officers, or if the Mayor of Burnley would confer with h town clerk they would probably learn that works of art for an art gallery could be purchased out of the rates, just as lawfully as specimens for a museum, or books for a public library.

"Art Galleries and Museums and their Municipal Support."

THIS was the title of a paper which was read on 30th April last, before the members of "The Ulster Arts Club," Belfast, by Mr. F. Edward Ward.

The paper was of special local interest, seeing that it is generally agreed in the North of Ireland that the support which is given to the Municipal Art Gallery and Museum by the wealthy citizens of Belfast and its Corporation is far from what it ought to be, taking into consideration that Belfast ranks as the eighth city in size in the British Isles so far as population is concerned.

The lecturer in his opening remarks traced briefly the history and development of museums and art galleries from the earliest period up to the present, abroad and at home, referring to the Museums' Act of 1845, and its following statutes enabling town councils to found and maintain museums. Details and statistics were then given of what had been and was being done in England and Scotland as regarded the support given by municipal authorities in various towns, including Birmingham, Liverpool, Manchester, Glasgow, Leeds, Sheffield, Bradford, Aberdeen, Leicester, Nottingham, York, Bristol, Oldham, Plymouth, Reading, Sunderland, Derby, and Bath. In citing these towns many interesting details were given, such as the amounts annually expended on the purchase of art objects and pictures, the amounts levied by rates in the different towns, the average annual

attendances of visitors, the days and hours per week open, and also the public spirit which in almost all cases is so evident for the proper inauguration and up-keep of such institutions and which is generally, when evident or not, so well backed up by English municipal authorities. It was the absence of this local patriotism that seemed to be the root of the evil in Belfast. In the closing remarks of the paper, suggestions were made as to improvements in the Belfast Municipal Art Gallery and Museum, advocating above all, the cause and culture of art, as having a refining and elevating influence on the masses. That Belfast, with a population of over 351,000, largely composed of the working classes, should have such an art gallery and museum as the present one, where practically no money was expended annually in comparison with other towns, was a standing disgrace to those responsible for its management to whom the public looked for advancement. The space available was far from sufficient, a proper arrangement and separation of art and science objects was required, no catalogue was published or even existed, while a proper method of registering the number of visitors was required (the returns as at present given show an attendance daily averaging 1400, which is very dubious, seeing for instance Leeds with a population 80,000 more than Belfast, has a daily average of 900). In addition to these points Mr. Ward strongly advocated the establishment of a fund by public subscription for the purchase of pictures and the establishment of a permanent collection, as had so often and successfully been done in other cities, suggesting that the long established Belfast Art Society who hold their annual exhibition of pictures in the municipal gallery should act as the promoters of such a scheme.

The paper was followed by discussion amongst the members of the club and their friends including Professor Gregg Wilson, of the Queen's College, who advocated the cause of a proper museum from a natural history and science point of view, under municipal control. The following resolution was then passed unanimously and the honorary secretary instructed to send a copy to the Belfast municipal authorities, viz.:—"That it is the opinion of this meeting that

some movement should be made to impress upon our civic rulers the necessity for the establishment of a proper picture gallery and museum, sufficiently extensive to meet the wants of the general public, as a medium of instruction, and for the benefit of art and art workers in Belfast; and that a copy of this resolution be sent to the City Council."

The paper was accompanied by several coloured reproductions of pictures belonging to various towns in England and Scotland, the properties of their respective municipal authorities, and the lecturer regretted he was unable to show any belonging to Belfast since their city possessed none of sufficient importance for reproduction or publication.

K. Koetschau on Museums in 1902.

THE director of the Royal Historical Museum and the Firearms Gallery in Dresden, Dr. Koetschau, discusses in the *Jahrbuch der Bildenden Kunst* for 1903, pp. 93-98 (second year, published by the Deutsche Jahrbuch-gesellschaft in Berlin), in a paper headed "Museumwesen und Kunstförderung" (Museum matters and Art furtherance), the progress made in the year 1902 in this respect. The following extract from the chapter on museums, chiefly in Germany, will be of interest to the readers of this journal:—

K. E. Osthaus has erected in the city of Hagen, in Westphalia, a museum named "Museum Folkwang für Kunst und Wissenschaft," which has been decorated by H. Van de Velde, the well-known Flemish artist. No other museum in Germany shews in the decoration of the halls such harmony with the objects exhibited, wherefrom a highly artistic impression has resulted.

In 1897 a Union of Directors of Museums ("*Verband der Museumsdirektoren*") was founded by Professor Brinckmann, of Hamburg, and Dr. Angst, of Zurich, and this now includes eighty-four heads of museums throughout Europe. In 1901 the annual meeting was held in London, and in 1902 in Copenhagen. The union originally had the purpose of averting frauds and falsifications, but it now deals with

technical questions too. In the latter connection Meyer's three reports on American and European museums are also mentioned.

A new building has been erected in Hanover for a provincial museum of some importance; the building of the Art Institute (*"Kunsthalle"*) of Bremen has been considerably enlarged; and a complete re-arrangement has taken place in the Royal picture gallery of Stuttgart.

Dr. W. v. Seidlitz has dealt with the future of museums in the *Kunstchronik* for 1901-2 (No. 29). He advocates everywhere the separation of an index collection (*"Schausammlung"*) for the public from a study collection; he also advocates lectures or guidances by experts, who have been trained by the museum staff, and lastly urges the opening of the museums at night, as already done at some of these institutions in London, Berlin, and Copenhagen. In Paris there has been opened a special evening museum for art industrials. Von Seidlitz finally demands circulating exhibitions, to be installed from the contents of the museums. In France this has been already performed: objects of art wander, together with their cases, especially to towns with industrial schools, and lectures are given to illustrate these exhibitions. Dr. Koetschau mentions that England is in this respect in advance of all other countries.

Finally, reference is made to the jubilee of 50 years of the Germanic National Museum in Nuremberg and to the jubilee of 25 years of the Hamburg Museum of Art and Industry, as well as to the excellent "*Festschrift*" published on this occasion by friends and pupils of Professor Brinckmann.

The second chapter of Dr. Koetschau's paper deals with art furtherance, chiefly in Germany, containing many valuable and instructive remarks, and the whole report may, therefore, be warmly recommended to the members of the Museums Association.

A. B. MEYER.

General Notes.

AT HOME.

PICTURE INSURANCE AND VALUES.—The difficulty of arriving at the proper insurance values of pictures offered on loan to public galleries is constantly arising, but as these values are usually fixed by the owners of the pictures, the art gallery authorities have no voice in deciding them, though they may consider the values altogether too high. They must, therefore, accept the loan and thus be penalised by paying premiums on fancy prices, or lose the opportunity of exhibiting the pictures. It is often stated that the true value of an object is the sum that it would fetch at public sale But this method of arriving at values is not always available. An instructive example of the difference between insurance values and sale prices was recently afforded by a notable sale at Christie's, in London, where 33 pictures, which had previously been exhibited at the Mappin Art Gallery, Sheffield, the Guildhall, London, and at the Glasgow Art Galleries, realised £24,114, whereas the insurance values put on them by their owner was £79,850, an excess of more than £55,000 on the sale prices. It was felt at the time the pictures were lent for exhibition that the insurance values were high, but as they belonged to a period and school not often represented in sale-rooms there was no accepted authority for testing the values put upon them by their owner. It was rather curious that no single picture realised its insurance value at the sale, while in some cases they did not reach one-tenth of the insurance value. As sale prices are now published systematically, curators will soon be in a position to gauge more accurately the true value of pictures lent to art galleries, and owners may perhaps be guided by their opinion in fixing the values for insurance.

BRITISH MUSEUM.—Mr. Andrew Carnegie has offered to present the geological department of the British Museum with a complete reproduction of the skeleton of the gigantic Jurassic Dinosaur, *Diplodocus Carnegii*, in the Pittsburg Museum. The species was named after him in recognition of his having provided the funds for the expedition which discovered the remains. The task of making the cast will be laborious, and will cost probably more than £2,000, for the animal was of an enormous size (its length certainly exceeding 70 feet), and much bigger than any other land form known.

CHRISTIAN ANTIQUITIES AT THE BRITISH MUSEUM.—The recently-opened Christian room on the upper floor, near the staircase leading to the King's library, contains a very in-

teresting collection of antiquities distinctively Christian, or intimately connected with the early history of Christianity in the east and west. The lack of space and the general method of arrangement adopted in the museum have rendered it impossible to bring together from the treasures of the national collection such a display as might claim to be fairly complete. All that could be done was to make a careful selection which should indicate some of the chief features, leaving the details to be filled in by visits to other departments. Thus, for example, the few British remains dating from the Roman occupation are to be found in the Romano-British room; the ivory carvings are in the mediæval room, so that they may be compared with others the subjects of which are not of a religious character; and, for purposes of security, most of the jewels and works of art of considerable intrinsic value are exhibited in the gold room, where there is greater provision for their safe custody. As far as possible, the absence of originals has been remedied by the exhibition of casts, with reference to the place where the originals may be seen. The objects exhibited in the table and wall cases include engraved gems and gilded glass, casts of ivory carvings, small bronze objects and money weights, silver treasures, early ossuaries and tombstones, lamps from the catacombs and pilgrims' flasks, and Coptic antiquities, and others from Abyssinia.

British Museum.—Mrs. Anderson, widow of Dr. John Anderson, F.R.S., has presented to the British Museum the whole of her husband's natural history collection. It consists chiefly of mammals collected in Egypt with infinite trouble and at considerable expense, and is of special scientific importance and interest, as it contains the material on which Dr. Anderson based his great work on the Egyptian Mammalia, including all the types of the species described in that monograph. The collection further includes the series of specimens obtained by the late Mr. Theodore Bent in the Hadramaut district of Arabia, and the specimens procured by Mr. Witherby and others in the Soudan districts, hitherto poorly represented in this class of animals in the Museum.

Survey of the Fishes of the Nile.—The survey of the fishes of the Nile, which was undertaken by the Egyptian Government, with the co-operation of the Trustees of the British Museum, with the object of determining the species of fishes inhabiting that river, has been brought to a close after three years and a half of arduous work on the part of Mr. W. S. Loat, the superintendent of the survey, who has fished the river from the Delta to Gondokoro. The scheme was initiated by the late Dr. John Anderson, F.R.S., who has done so much to advance our knowledge of the zoology of Egypt. It was

started practically in the summer of 1899, and though the general results as regards the number of species new to science discovered are distinctly disappointing, considering the vast extent of the waterway, much useful and important information has been obtained bearing on the life-history of many of the species of fishes contained in the waters of the Nile. When Dr. Anderson started his project about 90 species were known to inhabit the river. Now that the whole collection made by Mr. Loat during the past three years and a half has reached the Natural History Department at South Kensington, Mr. G. A. Boulenger, F.R.S., to whom was entrusted the working out and description of the collection, is able to report that it consists of some 9,500 specimens, representing over 100 species of fishes, 14 of which he has described as new to science. Mr. Boulenger is now engaged in preparing for press the final description of all the material obtained. The work will be issued by the Egyptian Government, uniform with the monumental volume recently published, under the auspices of Mrs. Anderson, embodying the researches of her late distinguished husband in connection with the mammalian fauna of Egypt.

LIFTS FOR THE BRITISH MUSEUM.—A writer in the *Morning Post* says:—"Many lame and old men and women, finding it impossible to climb the stairs of the British Museum, are thus shut out from our splendid collections on the upper floor—from the gold ornaments and gems, from the Egyptian, Greek, Etruscan, and Roman treasures, from the Rothschild bequest, from the prints and drawings, and other possessions acquired or bequeathed for the intellectual benefit and enjoyment of the entire nation. We are greatly behindhand, Continental museums and galleries being generally provided with lifts. Is it too much to expect of the trustees of these national treasures that they will remember the claims of the lame and infirm portion of the nation, and provide for them a lift in our own British Museum?" Such aids to ascent are still more required at the branch of the Natural History Museum, where the difficulty of reaching the upper rooms fatigues even the robust, and shuts off completely the physically feeble students, be they never so intellectually great. But, after all, the people who would chiefly benefit would be the staff, especially when it is a question of carrying hundreds of heavy specimens up and down stairs. Let us not, however, spoil a good case by exaggeration. How many European museums have a passenger lift, and what are their names?

THE NATIONAL GALLERY.—The report of the director of the National Gallery for the year 1902, published as a Parliamentary paper, states that during the year the gallery in

Trafalgar-square was visited by 477,676 persons on the 208 free days, by 37,534 on the 30 Sunday afternoons on which it was open, and by 44,441 on students' days. The Tate Gallery was visited by 201,696 persons on the 206 free days, by 35,494 on 30 Sundays, and by 29,223 on students' days. In order that students may, if they wish, work both at the National Gallery and at the Tate Gallery the students' days at the Tate Gallery have, since October 7th last, been changed from Thursday and Friday to Tuesday and Wednesday in each week. To protect the National Gallery from fire Messrs. Watherston's premises in Pall-mall and the two southern blocks of St. George's barracks have been demolished in fulfilment of the undertaking given by the Government in 1901.

LARGE GIFT TO THE NATIONAL GALLERY.—Colonel John Temple Temple-West, late Grenadier Guards, of Villa Royale, Nice, died on February 15, leaving an estate of the value of £433,518 11s. 10d., of which £261,588 10s. 1d. is net personalty. Probate of his will, dated April 20, 1898, has been granted to Mrs. Frances Caroline Temple, the widow, and Temple De la Pole Temple, of the Salisbury Hotel, the son. Colonel Temple-West bequeathed £20,000 in trust for his wife in addition to what she will receive under her marriage settlement, £5,000 in trust for his son Richard, £1,000 to the Marine Society (*Warspite*), £1,000 to the Gordon Boys' Home, and £500 to the Society for the Prevention of Cruelty to Animals. He devised his real estate at St. George's Fields, Southwark, including the Surrey Theatre, in trust for his son Temple De la Pole and his daughter Eleanor Mabel and their issue. The will goes on to state: "And I hereby direct that after the above-mentioned and all other claims upon my said real and personal estate shall have been satisfied, including my funeral expenses and debts, as, likewise, all costs connected with the proving of this will, the residue of said personal estate as is comprised in public securities or bonds and shares in public companies shall be converted into money at the earliest favourable moment, and the realised amount thereof applied to the use and benefit for ever of the undermentioned public institutions and charities in and according to the stated proportions, viz.: To the Trustees or Governors of the National Gallery, in trust for the use and benefit of that institution, I hereby give and bequeath a sum amounting to two-fifths of the whole realised amount of the residue of the personal estate, the interest whereof to be expended on works of art in the manner said authorities shall see fit. The Society for the Promotion of Christian Knowledge, the Royal Naval Benevolent Society, the Royal Asylum

of St. Anne's Asylum, the Corporation of the Sons of the Clergy, and St. George's Hospital. Collectively I give and bequeath the amount of the remaining three-fifths of said residue to be apportioned equally amongst them all. The sum allotted in each individual instance to remain invested in the names of its trustees, and to form part of the formation fund or endowment of each institution."

MUSEUM OF SCIENCE AND ART, EDINBURGH.—The Stationery Office has just published the second part of the guide to the collections illustrative of Scottish geology and mineralogy in the Edinburgh Museum of Science and Art. It has been compiled by Mr. J. G. Goodchild. The collection to which it refers is exhibited in the hall adjacent to the galleries in which the rock- and other specimens illustrating the Geological Survey of Scotland are displayed. It is perhaps the most complete collection yet formed of the minerals of one country. Mr. Goodchild's guide explains the principle of arrangement adopted, and gives short notes on the different minerals, telling where the various minerals are found, and what is their chemical composition and crystalline form. The guide should add considerably to the usefulness of the collection.

GLASGOW ART GALLERY.—The collections in the Kelvingrove Gallery have been enriched by the addition of an important work, "The Forerunner," by the late President of the Royal Academy, Sir John E. Millais. The picture, which is the gift of Sir Charles Tennant, Bart., has historical and pathetic interest from the fact that it represents practically the last accomplishment of the long and brilliant career of one of our greatest painters. In this work the President makes a return to the religious class of works, in some of which, such as "Christ in the Carpenter's Shop," his early reputation was made. It represents the Baptist, girt around the loins with a leopard's skin, standing in a forest tying together two sticks in the form of a cross. In the distance is the sunset sky typical of a dying faith, and by his side a rude altar on which is a sacrificial knife. The picture was shown in the Royal Academy in the year of his death, and in the subsequent winter exhibition of the illustrious painter's works in the Academy it was also a feature.

A BURNS' MUSEUM AT DUMFRIES.—The Dumfries town council have secured a lease of the house in which the poet Burns lived and died, from the directors of Dumfries and Maxwelltown Industrial School, at a rent of £20 per annum, for 25 years. It is proposed to sub-let the house to the Dumfries Burns' Club, with a view to its being used as a Burns' Museum.

THE HORNBY COLLECTION, LIVERPOOL.—In September 1900, the city council accepted the offer of the executors of the late Mr. Hugh Frederick Hornby to present to Liverpool his art library and collection of engravings, autographs, &c., on condition that these should be kept separately for the use and benefit of the art-loving public. This was accompanied by a bequest of £10,000 to assist the authorities to provide a building in which to house these treasures. Plans of such a structure are being prepared by the surveyor (Mr. Thos. Shelmerdine), and these are rapidly approaching completion. It is understood that the site chosen is at the rear of the Picton reading room. Meanwhile the collection is carefully guarded in a wing of the free library.

HULL MUSEUM.—This museum continues to receive specimens at a rate that must provoke the admiration and envy of less favoured institutions. Publication No. 13 contains a record of additions made during the first quarter of this year. First in interest and importance stands a list of Barrow remains from Efaefsk. The series includes rings, armlets and fibulæ of bronze, beads of glass and amber, spindle whorls of baked clay, axe heads (iron), knives and spear heads, a silver pendant, and a tress of human hair wound on wood and cased in the same material wound round with bronze wire. While some of these articles have a character of their own, many shew a striking resemblance to Anglian and Danish remains from the East Riding. Among other acquisitions are—a striated limestone boulder (probably from Teesdale) weighing a ton and a half, a piece of Scandinavian Augite-Syenite found near Beverley road, some rare Hull tokens, an Esking canoe, several whaling relics, and some of the old wooden pipes formerly used for supplying the town with water.

PROPOSED MUSEUM FOR HARROGATE.—An effort is being made at Harrogate to establish a museum for the town, and much interest is being taken in the movement. The Stray and Pleasure Grounds committee of the corporation have been approached on the matter, with the object of obtaining the use of two or three of the smaller rooms at the Spa, but it was subsequently found that the promise of curios and other interesting items for exhibition, on loan or gift, were so numerous that more space would be required. The committee, under these circumstances, subject to the sanction of the corporation, will place the Winter Garden at the disposal of the promoters. Mr. Thos. Holroyd, of Harrogate, has promised a number of oil paintings and water colours, provided the movement extends to an art gallery.

EXHIBITION OF GREEK ART.—An extremely interesting collection of examples of ancient Greek art is now on view in the gallery of the Burlington Fine Arts Club, where it will remain open until the middle of July. The exhibition has been planned to illustrate the history and range of Greek art from the beginning of the sixth century, B.C., down to the Augustan age. To the energy and skill shown by Mrs. Arthur Strong is due much of the success which may be expected to attend the display, while valuable aid has been given by Mr. G. F. Hill and Mr. C. Newton-Robinson, who undertook the arrangement of the coins and engraved gems respectively. These form two of the five sections into which the collection is divided, the others being specimens of sculpture and bronzes, terra cottas and small marbles, and vases. Examples of statuary of the first order have been lent by the Duke of Devonshire, Lord Lansdowne, Sir Frederick Cook, M.P., and other possessors of unique specimens; and to various departments contributions have been made, not only by a number of individual owners, but by the Governors of Harrow School, the Royal Museum at Canterbury, Girton College, Christ Church, Oxford, and the South Kensington Museum. Perhaps the objects which will attract most attention are a head of Aphrodite (from Lord Leconfield's collection), which authorities are agreed in attributing to Praxiteles, and a fragment from the frieze of the Parthenon, lent by Mr. J. D. Botterell, in whose garden in Essex it was recently recovered.

ART IN IRELAND.—Mr. J. P. Boland, M.P., writing in the *Standard*, points out the feasibility of obtaining an art gallery for Dublin in connection with a Bill now before Parliament. He says:—"The Public Offices (Dublin) Bill, now before Parliament, has for its object the acquisition of a very extensive sight for the erection of a College of Science and other government offices. The site selected immediately adjoins the Museum, National Library, and Royal Dublin Society. In this group of art buildings there is alone wanting that indispensable necessity to the art students—namely, a permanent gallery of works of the best modern painters, and an Academy in connection therewith. It is a matter of common knowledge that there are several wealthy and patriotic Irish men and women who are prepared, if a suitable site is allocated by the government, to contribute pictures or money towards the erection of such a gallery. The crucial point is the site. Now, without interfering with the very necessary requirements of the proposed College of Science and other government buildings, it is possible to set aside a small portion of the large extent of land to be acquired, which would com-

pletely satisfy the very modest demands on which the gifts of these public-spirited Irish men and women are dependent. The Bill is at this moment before Parliament. Time is pressing. Such an opportunity cannot occur again. It, therefore, behoves every lover of art to do his utmost to secure this site for a country which, in spite of few opportunities, has preserved the Celtic passion for beauty, and is seeking every channel to express it. It is only necessary to mention the names of living artists, such as Sargent, Shannon, Nathaniel Hone, Lavery, and Orpen, to show what Irishmen are capable of."

SIR JOHN SHEARER.—On the occasion of the visit of the King to Glasgow in May, Bailie Shearer received the honour of knighthood, the ceremony being performed in the Art Galleries at Kelvingrove. Sir J. Shearer has for many years been chairman of the committee in charge of the Parks and Museums of Glasgow, and when the Museums' Association met in Glasgow, in 1896, he took an active interest in its proceedings. His kindly presence and graceful hospitality remain pleasant memories to all who were present on that occasion.

SALFORD MUSEUM AND ART GALLERY.—The Committee of the Salford Museum and Art Galleries have added to the permanent collection of pictures a large oil painting, "Dittisham on the Dart," by Stuart Lloyd, R.B.A. This is the second picture recently added to the collection at Peel Park. The other is by Frederick Goodall, R.A., "The Thames, from Windsor Castle."

ZOOLOGICAL SOCIETY.—P. Chalmers Mitchell, M.A., D.Sc., has been appointed secretary to the Zoological Society, in succession to Dr. P. L. Sclater, resigned. We understand that Mr. W. L. Sclater, M.A., who temporarily held the position after his father's retirement, will return to the South African Museum, to continue the excellent work he has carried on there since his appointment as director.

RADIUM.—An exhibit in illustration of this substance constituted the chief novelty for the edification of the Whit-Monday crowd at the Natural History Museum, London. A black box had been fixed on a stand, and, lifting up the black curtain that covered its opening, one saw the word "radium" shining with a faint purplish phorphorescence. It had been painted with radium bromide on hexagonal sulphide of zinc.

LIBRARIES AND MUSEUMS.—Not many of the members of the Museums' Association turned up at the meeting of the Library Association, announced in our last number, to hear Mr. Minto, of Brighton, read his paper on this subject. The single one

that did attend has kindly furnished us with a short report of Mr. Minto's remarks. Libraries, museums and art-galleries, he said, have in common their educational nature. This idea is a modern one, since museums were not originally intended for the education of the masses. Now-a-days, however, each is the natural complement of the other, and there is, therefore, an advantage in their close relationship. The question then arises: should all these institutions in a single town be under one head? The qualities of a good librarian are obviously also those of a good curator, and although it is impossible for one man to be a specialist in all branches of library and museum and art-gallery work, still the administrative qualities required are the same, while the machinery for carrying out the routine work in each case can be assimilated. The real difficulty in carrying out work of this nature at the present day is the difficulty of obtaining intelligent lads to take up the museum department of it. The librarian, as was pointed out by a subsequent speaker, has better prospects than the museum curator, while the pay of the latter is insufficient to attract the proper kind of youths in sufficient number. After some remarks, of a nature familiar to our readers, on the local and limited character of local museums, on the visits of school children and essays written by them on exhibited objects, Mr. Minto urged that to promote an interest in the subjects illustrated by museums it was necessary to catch the coming generation young. He also commented on the advisability of local museums specialising in one branch of science, and of libraries specialising in books relating to the industries and other peculiarities of their district. The paper was followed by an interesting discussion, but most of the speakers seemed to wish that Mr. Minto had dealt more in detail with the practical difficulties in the way of associating libraries with museums, although they admitted that the subject was of a nature perhaps too delicate for public discussion.

ABROAD.

Professor Luigi Bombicci, professor of mineralogy in Bologna, and director of the Museum of Mineralogy, died this year.

MUSEUM FOR HEIDELBERG.—A millionaire who desires to remain unknown has forwarded to the Mayor of Heidelberg the sum of 100,000 marks towards the cost of a municipal museum.

A MUSEUM MICROSCOPE.—Yet another apparatus for exhibiting microscope-slides in the public galleries of museums has been devised by Dr. Auguste Pettit, and described by the

late Dr. H. Filhol in a paper entitled "Appareil à défilement pour préparations microscopiques" (*Bull. Mus. Hist. Nat. Paris*, 1901, pp. 357-360). The apparatus seems well devised, but it seems a pity that Dr. Filhol should, as he states, have been unable to find that any similar apparatus was in use in other museums. Had he been a reader of the *Museums Journal* he would have known that there were at least three different types already, namely, at Hamburg, Washington, and Edinburgh. The last of these has recently been put on the market by Messrs. Watson and Sons, at a price of £10 10s. 0d.

A DIRECTORY OF FRENCH MUSEUMS.—Our readers may not be aware that, since the year 1900, there has existed a directory of French museums, drawn up very much on the lines of our own Museums' Directory now in progress, but giving rather fuller details with regard to the collections. It is entitled "Annuaire des Musées scientifiques et archéologiques des Departements," and is compiled by the Commission des Musées scientifiques et archéologiques, of which the President is Mr. Gaston Boissier, and the Secretary Mr. Babelon. The volume contains an account of no less than 447 museums, arranged in alphabetical order according to the names of their towns. There is also an index arranged according to the Departments. The publisher of the book is Mr. Ernest Leroux, 28, Rue Bonaparte, Paris.

AMERICAN MUSEUM OF NATURAL HISTORY.—Professor W. M. Wheeler, of the University of Texas, has been appointed as curator of invertebrate zoology, and Dr. Livingstone Farrand, of Columbia University, as assistant curator of ethnology, to this museum.

THE ACADEMY OF SCIENCE OF ST. LOUIS.—This institution is so well-known to scientific men all over the world that it will come rather as a surprise to them to learn that it has hitherto had no local habitation. This defect is now to be remedied. Mrs. Eliza McMillan and her son have offered a piece of property in a central district of St. Louis, which the members of the Academy most gratefully accept. This is as a memorial to the late William McMillan who was a member of the Academy. The buildings are to be got ready for the World's Fair, and among them there will be a museum of natural history and a library containing the valuable collections of specimens and books which the Academy has accumulated—all of which are to be made accessible to the public.

THE MUSEU PAULISTA, SÃO PAULO, BRAZIL.—This museum was created by a law of the State in 1893, and its organisation has been entrusted to its actual director, Dr. H.

von Ihering. Officially inaugurated on 7th September, 1895, it endeavours to study the fauna of its country. Therefore the zoological collections have been specially expanded, without neglecting the collections of anthropology, ethnography, palæontology, mineralogy, numismatics, and national history, and including a gallery of pictures. The museum is established in the magnificent monument of Ypiranga, perhaps without rival in South America, and erected in remembrance of the proclamation of Brazilian independence (7th September, 1822). On the first floor are installed the collections free to the public, while on the ground floor are distributed the directors' office, the laboratories, with the scientific collections, offices, &c. Its library has more than 4,000 volumes, and the *Revista* is exchanged with about 300 similar publications. The number of visitors is annually from thirty to forty thousand. The budget is of $70,000,000 *rs.* (£3,500). The scientific staff is composed of the director, the zelador-custos, a preparator, and a travelling naturalist. This last undertook, by order of the museum, during the last two years, an expedition to the Juruá River (Amazonas), where no scientific exploration had hitherto been made. The success of this undertaking was very satisfactory, and the scientific results will be published in the next volume of the *Revista.* Before that the museum traveller had already been sent to various other states of Brazil. The museum obtained also in this way very valuable material of tertiary shells from Patagonia, studied in Vol. II. of the *Revista*, and so has come into possession of perhaps the richest collection illustrating this subject. But the principal mission of the museum will be the scientific study of its country; therefore, besides the *Revista*, catalogues will be published, enumerating synoptically all its fauna. Thus, the one referring to birds is about to be finished, also those about mammals, molluscs, myriapods, &c., these works being helped by well-known European specialists. In these ways the Museu Paulista seek to correspond to its double mission: to offer to the public instruction in natural history, and to contribute to the scientific knowledge of Brazil.

Correspondence.

To the Editor of *The Museums Journal.*

SIR,—On page 345 of the *Journal* for May is a note on "London Local Museums," and in it, it states that Mr. Horniman has presented a museum to Brockley. This is not correct. The Horniman Museum is at Forest Hill, close to the boundary of Dulwich. For the sake of country visitors I may say that our nearest stations are Lordship Lane and Forest Hill, about five minutes from either. The museum is open every day including Sundays from 2 p.m. to 9 p.m.

R. QUICK.

The Horniman Museum, Forest Hill, S.E., May 22nd, 1903.

[According to the map, Brockley adjoins Forest Hill. The museum is on the border of the latter district. Mr. Quick's definite location of the museum with its nearest railway stations will be useful, for there seems to be some difficulty in realising the exact position of this interesting museum.—ED.]

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ABERDEEN.

Aberdeen Art Gallery and Industrial Museum.

Governing Body.—A committee elected by the subscribers and the Town Council.

Staff.—Two attendants.

Source of Income.—Subscriptions from annual subscribers and grant from the Town Council Common Good Fund.

Nature of Collections.—Principally oil paintings; a few water colours, drawings, and etchings; engravings and reproductions issued by the British Museum.

Special Collections.—(i) The Macdonald Collection, viz., 72 oil paintings, 92 portraits of the principal artists of the latter part of the 19th century (mostly painted by themselves); also a number of original drawings and etchings, bequeathed by Mr. and Mrs. Macdonald. (ii) The Legros Collection of black and white drawings (presented by Professor Legros).

Time and Terms of Admission.—Open from 10 a.m. to 6 p.m., or dusk. Free.

Number of Visitors.—About 60,000 annually.

Lectures.—There have been a few lectures given, but no arrangement for having lectures at stated periods.

Loan of Collections or Pictures.—A picture has been lent out occasionally.

Working Expenses.—Last year's income was £200. Expenses, including taxes, repairs, wages, fire, and light, were £200.

Exhibition Space.—One room 46 ft. × 28 ft., for Kensington Loan Collection; one do. 46 ft. × 28 ft., Macdonald Collection; one do. 28 ft. × 24 ft. for Artists' Portraits; one do. 54 ft. × 28 ft., oil paintings; one do. 54 ft. × 28 ft., drawings, etchings, and engravings; one do. 62 ft. × 54 ft. oil paintings and sculpture; one do. 38 ft. × 28 ft., reproductions from British Museum and cases of industrial exhibits; one do. 38 ft. × 28 ft. empty at present.

History.—Built about 1884, was let out for Art and Industrial Exhibitions, at a fixed rental for a given period. Since the permanent collections have increased, the committee has opened the gallery to the public free during the whole year, but allows the local Artists' Society to hold a biennial exhibition in October, November, and December, and to charge for admission.

Director.—G. MACKIE.

ABERDEEN.

University Museums.

Governing Body.—The University Court and Senatus, who appoint a University Museum Committee. Convener, Prof. G. Pirie.

Staff.—Two honorary curators for (A) and (B).

Nature of Collections.—(A) The Archæological Museum—Egyptian and Scottish. (B) The Wilson Museum—Antiquities and Coins. (C) The Departmental Museums of Natural History, Geology, Anatomy, Botany, Pathology, &c., in charge of the respective Professors.

Time and Terms of Admission.—Daily, on application.

Number of Visitors.—

Loan of Collections.—

Lectures.—

Income and Expenses.—

Exhibition Space.—

Publications.—

Director.—

ABERYSTWITH.

The Museum of the University College of Wales.

Governing Body.—The Council of the University College of Wales.

Staff.—One curator.

Source of Income.—Occasional grant from the College Council.

Nature of Collections.—Chiefly geological; also objects of antiquarian interest connected with the Principality.

Special Collections.—The D. C. Davies Collection of Fossils from the mountain limestone of the Vale of Llangollen.

Time and Terms of Admission.—July, August, and September, 10,30 a.m. to 1 p.m. and 2.30 p.m. to 4.30 p.m. Charge, 6d.

Number of Visitors.—About 1000 annually.

Income and Working Expenses.—Very small; about £40 per annum.

Exhibition Space.—One large oval Museum Hall, the floor occupied by table cases containing the geological and mineralogical collections, the walls by cases containing more miscellaneous exhibits.

Publications.—A short Hand-book to the Museum, by the late D. Humpridge. A List of the Birds of Aberystwith and neighbourhood, by Professor Salter, D.Sc, A List of the Flowering Plants and Ferns of Aberystwith and neighbourhood, by Professor Salter, D.Sc. (in the press.)

Curator.—Professor SALTER, D.Sc.

AIRDRIE.

Airdrie Free Public Museum.

Governing Body.—Free Public Library Committee. Chairman of Committee. Provost Martyn; Hon. Sec., Thos. Jeffrey, J.P.

Staff.—A Board of eight curators (Chairman, Wm. Ferguson, J.P.), who undertake voluntarily the care of the various sections.

Source of Income.—Library and Museum are supported by Borough Rate of 1d. in the pound. A grant of £60 to £70 has been made to this institution by the Lanark County Council for several years past, out of the Government Education Grant.

Nature of Collections.—The most remarkable feature of the museum is its wealth of mineralogical and geological specimens, largely the gift of the late Dr. Hunter, Selkirk. There are also good collections of (1) British birds; (2) weapons, mediæval, modern, and oriental; (3) local antiquities and relics of the Covenanters; (4) local manufactures and models of engines. There is an observatory, with a telescope presented by Dr. Thos. Reid, of Glasgow.

Time and Terms of Admission.—Open daily from 9 a.m. till dusk: Saturdays till 8 p.m. Admission free.

Number of Visitors.—Estimated number, 20,000 annually; to reading rooms and museum, 80,000.

Loan of Collections or Pictures.—Mineral specimens are lent to the High School; no other loans are made.

Lectures.—These are given throughout the greater part of the year, in connection with the Airdrie Society of Naturalists.

Income and Expenses.—These are involved in the income and expenses of the library. Approximate figures for the current year: income, £350; expenses, £330.

Exhibition space.—Three rooms; (i) 60 ft. × 40 ft.; (ii) 40 ft. × 20 ft.: (iii) 24 ft. × 18 ft.

Publications.—Annual Report of Library.

General Information.—The museum was founded in 1894. The nucleus was a gift of fossils, &c., from Dr. Hunter-Selkirk. Mr. Reston, a local merchant, has gradually formed a fine collection of British birds. The public has taken much interest in the museum, and many specimens have been sent in from all parts of the world. The museum owes much of its success to Mr. Robt. Dunlop, its first curator.

Librarian and clerk to the curators.—John Gardiner.

ALTON.

The Curtis Museum.

Governing Body.—The Committee of the Alton Mechanics' Institution.

Staff.—One curator.

Source of Income.—Grants from the Mechanics' Institution and voluntary donations.

Nature of Collections.—Zoological, botanical, geological, mineralogical, ethnological, and archæological. British mammals and birds especially good, and there is a good collection of bones of the Moa and the Dodo.

Times and Terms of Admission.—From 10 a.m. to dusk daily (Museum lighted upon Saturday evenings). Members of the Mechanics' Institution are admitted free; others must be accompanied by a member, or must pay an entrance fee of 2d.

Publications.—A Handbook to the Museum is published, price 3d.

History.—Almost the whole of the collections was presented to the town by the late William Curtis, Esq. (surgeon), and the museum has been named after him.

Curator.—William Curtis.

ALTRINCHAM.

Altrincham Museum.

Governing Body.—Altrincham Urban District Council.

Staff.—Care of museum falls upon the secretary of the Free Library and Technical School. Arrangement of museum effected by occasional help from other museums.

Source of Income.—From the rates.

Nature of Collections.—Shells, fossils, birds, earths, chemicals, Egyptian specimens, pictures; also a small loan collection from the Education Department.

Times and Terms of Admission.—Mondays, Wednesdays, and Saturdays, 10-1, and 3-8.30. Admission free.

Lectures were given during the last winter session; it is intended to continue them.

Loan of Collections or Pictures.—None lent.

Exhibition space.—One room, 35 ft. x 22 ft.

General Information.—The museum was commenced July, 1898, by a gift of Egyptian remains, presented by the late Sir W. C. Brooks. It has grown by gifts from private individuals and from the Owens College Museum. From the latter source were received collections of mollusca, fossils, &c.

ARBROATH.

Arbroath Museum.

Governing Body.—Fifteen Directors, chosen from Museum Society (subscribers of 2/6 and upwards).

Staff.—One curator.

Source of Income.—(i) Annual subscriptions of members (2/6 and upwards); (ii) admission fees at door (1d. each person); (iii) occasional grants from Town Council.

Nature of Collections.—Natural History generally, especially strong in insects, coins, &c.

Times and Terms of Admission.—Open daily. Charge for admission, one penny.

Number of Visitors.—1571 last year.

Lectures.—None given.

Loan of Collections or Pictures.—Specimens lent for purposes of science or art.

Income and Working Expenses.—For last year, income, £38. 8s. 0d.; expenses, £17. 8s. 7d.

Curator.—Mr. ABNER JOINER.

AYLESBURY.

The County Museum, Buckinghamshire.

Governing Body.- -The Committee of the Bucks. Architectural and Archæological Society (President, the Earl of Rosebery ; Chairman, Sir Henry Augustus Smyth, K.C.M.G.).

Staff.—One honorary curator.

Source of Income.—Subscriptions of the members of the Bucks. Architectural and Archæological Society.

Nature of Collections.—Chiefly pre-historic antiquities of the county.

Special Collections.—The remains from the Romano-British Pile-Dwellings at Hedsor.

Exhibition Space.—One room. A smaller adjoining room serves as a library and committee room.

Publications.—"The Records of Buckinghamshire," 8vo. Published annually since Jan. 1854.

History and general remarks.—The society was founded in 1847. Those interested in the museum do not consider it at all adequate for its purpose. About 1892 Sir Harry Verney, Bart., and Mr. A. Heneage Cocks (the hon. curator) made great efforts to rouse interest in the matter and obtain sufficient money to establish a satisfactory county museum, but none of the richer people in the county gave any help, and the scheme had to be abandoned. During 1902 the Coronation Celebration Committee of Aylesbury proposed to devote the greater part of the money raised, to a county museum, provided the Lord Lieutenant would inaugurate a subscription for the purpose. As he declined to assist in the matter, the scheme fell through.

Hon. curator and librarian.—ALFRED HENEAGE COCKS.

BACUP.

Museum of the Bacup Natural History Society.

Governing Body.—A president (the Rev. J. S. Doxey), two vice-presidents, a committe, consisting of the curator (Mr. P. J. Roberts), librarian (Mr. H. L. Halliwell), hon. treasurer (Mr. R. Crompton), hon. secretary (Mr. Horace B. Smith), and four other members.

Staff.—one curator.

Source of Income.—Members' subscriptions.

Nature of Collections.—Geology, mineralogy, botany, ornithology, entomology, conchology, microscopy, archæology, and a special collection of carboniferous fossils.

Time and Terms of Admission.—

Lectures.—Public lectures are given during the winter session.

Working Expenses.—Income for last year, £68. 8s. 1d.; expenditure, £81. 3s. 1d.

Exhibition Space.—One room, 30 ft. × 18 ft., used also as lecture-room. A room down-stairs is used as a reading-room.

From its situation, Bacup is favourably circumstanced for the formation of a collection of carboniferous fossils. Several very fine specimens from these rocks have been presented by the Natural History Society to the Owens College.

BAKEWELL.

Museum of the Bakewell Naturalists' Club.

Governing Body.—Secretary, curator, and committee.

Staff. – One curator.

Source of Income.—Private subscriptions.

Nature of Collection.—General natural history.

Time and Terms of Admission.—Open free on Tuesdays and Fridays, from 8 p.m. to 10 p.m.

Number of Visitors.—About 20 annually.

Lectures.—From two to four given every winter.

Working Expenses.—Income, £22 ; working expenses about £18.

Exhibition Space.—Two rooms.

This museum has been formed for the purpose of getting together a type collection of natural history specimens for the instruction of members.

Curator.—WILLIAM BOULSOVER.

BANFF.

Banff Museum.

Governing Body.—Banff Town Council.

Staff.—Managed at present by a committee of the Town Council.

Source of Income.—Payments for admission.

Time and Terms of Admission.—The museum is open during July, August, and September, every Wednesday, Thursday, and Friday; with an admission fee of threepence. On other occasions admission is sixpence. But on New Year's Day, and on the half-yearly feeing market days, the entrance is reduced to one penny.

Number of Visitors.—Exceed 500 annually.

A large public library building is in course of erection, and in this accommodation is being provided for the museum, which will then be brought under the Public Libraries Act, and the keeper of the library will no doubt be keeper of the museum also. The picture gallery (at present in the Town Hall) will, it is expected, be likewise transferred to the new library building.

BANGOR.

Bangor Museum.

Governing Body.—Museum Committee of Town Council.

Staff—The librarian of the Free Library acts as curator.

Source of Income.—Library rate.

Time and Terms of Admission.—Open daily (except during times of cleaning), free, from 10 a.m. to 6 p.m. in summer, and till dusk in winter.

BARNARD CASTLE.

The Bowes Museum.

Governing Body.—Trustees appointed under a scheme made by the Charity Commissioners in 1897.

Staff.—A curator, assisted by attendants, gardeners, &c., who vary in number according to the time of year.

Source of Income.—Endowment and admission fees.

Nature of Collections.—Pictures, pottery and porcelain, ivories, metal-work, furniture, tapestries, &c.

Time and Terms of Admission.—Open every day, except Fridays, from 10 a.m. to 5 p.m. in summer, and to 4 p.m. in winter. Charge for admission, threepence.

Number of Visitors.—Average for the last fifteen years, 15,291.

Loans.—Pictures are occasionally lent out.

Exhibition Space.—Picture gallery, 204 ft. × 44 ft.; sculpture gallery (at present unoccupied), 204 ft. × 44 ft.; reception room, museum floor; seven large rooms. Library, three large rooms; four other large rooms at present unoccupied.

Publications.—A Guide to the collections is on sale at the museum.

Curator.—Owen S. Scott.

BIRMINGHAM.

City of Birmingham Museum and Art Gallery.

Governing Body.—A committee consisting of eight members of the city council, and eight members not in the city council.

Staff.—One director, one assistant director, two museum foremen, ten attendants, one messenger, one lady clerk, one boy clerk, and ten cleaners (women).

Source of Income.—Free Libraries Rate.

Nature of Collections.—Pictorial and Decorative Art. Arms and Armour. The collection of objects of industrial and decorative art is arranged in the great Industrial Hall. It consists of jewellery and gold and silversmiths' work; Limoges and Oriental enamels; ivory carvings; Oriental porcelain and earthenware; glass; decorative iron-work; steel-work; bronzes; carvings in wood, marble, and stone; textile fabrics and electrotypes. One gallery is devoted to a very complete collection of specimens of Italian Art, principally of the Renaissance period, including sculpture, wood-work, decorative iron-work, bronzes, majolica, metal-work, glass, &c Another gallery contains a collection of more than one thousand specimens of arms and armour of all ages and countries, illustrating the origin and development of fire-arms, together with cross-bows, swords, rapiers, and other weapons of defence and attack. A large representative collection of Wedgwood Ware, presented by the Messrs. Tangye, is exhibited in a gallery set aside for this purpose.

Time and Terms of Admission—Open on Monday, Tuesday, Thursday, and Saturday. 10 a.m. to 9 p.m. throughout the year. Wednesday and Friday, 10 a.m. to 4 p.m., October 1st to March; 10 a.m. to 6 p.m., March to September. Admission free.

Number of Visitors.—700,000 to 800,000 annually. Number ascertained by turn-stiles.

Lectures.—These are given occasionally.

Loan of Collections or Pictures.—Pictures and other objects are often lent to other Corporations, or for special exhibitions.

Working Expenses.—Between £3700 and £4000 a year.

Publications.—A shilling handbook to Industrial and Decorative Art objects; catalogues of the permanent collection of pictures at sixpence and one penny; sixpenny handbook to Wedgwood collection. Catalogues of the Special Loan Collections are also issued. There is an annual sale of 15,000 to 20,000 catalogues, and from 600 to 800 photographs.

The pictures and objects forming the Permanent Collections have either been presented to the Corporation, or have been purchased by means of a Special Fund, founded by Messrs. Richard and George Tangye with a donation of £10,000, which was increased by public subscriptions to £21,000. This fund is called the Art Gallery Purchase Fund. The total value of the gifts received is about £50,000. Extensive purchases have been made on behalf of the Committee. This fund is the only one available by the Corporation for the purchase of pictures and objects of art, as no portion of the city rates is set aside for this purpose. A private subscription fund, called "The Public Picture Gallery Fund," is also devoted to the purchase of pictures for presentation to the Corporation Art Gallery.

Director.—WHITWORTH WALLIS, F.S.A.

BIRMINGHAM.

Aston Hall Branch Museum.

Staff.—One foreman, three attendants.

Source of Income.—Free Libraries Rate.

Nature of Collections.—Pictorial Decorative Art, Arms and Armour, Natural History.

Time and Terms of Admission.—Open daily, from 10 a.m. till dusk. Sundays: summer, 2 p.m. till 5 p.m.; winter, 2 p.m. till 4 p.m. Admission free.

Number of Visitors.—150,000 annually.

Working Expenses.—£700 to £800 a year.

Publications.—A penny Handbook, historical and descriptive; and a penny Handbook to the Collection of Birds. There is an annual sale of these handbooks of 10,000 to 12,000.

Aston Hall is a fine early 17th century mansion, near Birmingham, built by Sir Robert Holt. It is the property of the Birmingham Corporation, and is used by them as a Branch Museum, under the control of the Museum and Art Gallery Committee.

BLACKBURN.

Free Public Library, Museum and Art Gallery.

Governing Body.—A general committee which appoints a special sub-committee from its numbers with the following powers—"to select and purchase from time to time within the limit of expenditure which may be fixed or approved by the general committee objects of interest for the museum, and to deal with all matters relating to the museum which may from time to time be referred."

Staff.—Librarian and curator (offices combined), one caretaker, with occasional help from library porter.

Source of Income.—Library Rate (1d.), and since 1900, the Gymnasium and Museum Rate (½d.).

Nature of Collections.—Art Gallery—oil paintings and water colours. Museum—natural history; industrial art; archæological and ethnological collections. These include—(*a*) The "Eccles" collection of Solenhofen fossils; (*b*) a collection of Lancashire birds mounted in groups in which natural surroundings are imitated as far as possible—variations of plumage due to age and season shewn in many cases; (*c*) the "Ashe" collection of ethnological objects from Uganda.

Time and Terms of Admission.—Open daily 10 a.m. till dusk (Sundays excepted). From November to March (both inclusive), open on Saturday evenings from 7 to 9. Admission free.

Number of Visitors.—About 65,000 annually. Number arrived at by counting.

Lectures.—None given.

Loan of Collections or Pictures.—Pictures are occasionally lent on application to other art galleries.

Working Expenses.—The ½d. rate produces an income of £490, and in the estimates 1902-3 £60 is allowed for the purchase of objects.

Exhibition Space.—North Museum (industrial art and geology), 68ft. × 34ft; South do., (natural history and ethnology), 65ft. × 19ft.; West do., (natural history), 62ft. × 16ft; General Art Gallery, 56ft. × 35ft.; Sculpture Gallery, 43ft. × 20oft.

Publications.—Annual report and art catalogues. Guide to the Collection of Minerals.

Curator and Librarian.—R. ASHTON.

Ever since the adoption of the Free Libraries Act in 1853 (put into operation in 1860), it has always been intended that a museum should also be provided. In 1874 special buildings were erected for a library and museum, and these were extended in 1894, to provide a sculpture gallery and a general art gallery. The Dodgson collection of pictures formed the nucleus of the art gallery, and Mr. James Eccles' donations that of the geological collections. Mr. Geddes' Drift collection has been embodied in the latter during a recent re-arrangement by Mr. Goodchild.

BOLTON.

Chadwick Museum.

Governing Body.—The Parks' Committee, appointed by the Town Council from its own members.

Staff.—Curator, Assistant Curator and two assistants.

Source of Income.—Rates.

Nature of Collection.—Natural History and Antiquities. Special collections of British Hydroids and Bryozoa and of Coal Plants.

Time and Terms of Admission.—Mondays and Saturdays, 10 a.m. to 9 p.m.; other days, 10 a.m. to dusk. Admission free.

Number of Visitors.—About 275,000 annually. Number ascertained by turnstile.

Loan of Collections.—Natural History objects are lent to schools.

Lectures.—Free lectures during the winter months, and addresses and demonstrations throughout the year to senior scholars by arrangement with the principals.

Income.—Estimated at £1,220.

Exhibition Space. Four rooms 32ft. × 28ft. given up to Palæontology and Mineralogy, four of same size to Zoology, three to Antiquities and Anthropology.

Publications.—Annual Report.

Curator.—W. W. MIDGLEY, F.R.Met.S.

BOLTON—*(Continued).*

Hall-i'-th'-Wood Museum.

Governing Body.—The Parks Committee, appointed by the Town Council from its own members.

Staff—Curator, assistant curator, and one attendant.

Source of Income.—Rates.

Time and Terms of Admission.—Daily, from 10 a.m. till dusk. Admission free.

Working Expenses.—Estimated at £350.

Publications.—Illustrated catalogue and annual report.

Curator—W. W. MIDGLEY, F.R.Met.S.

Hall-i'-th'-Wood, a fine 16th century mansion in post and plaster, was once the residence of S. Crompton, who here invented the spinning-machine known as the "Mule" The house was acquired by W. H. Lever, Esq, who handed it over to the Corporation for use as a Technological Museum. It was opened for this purpose in July, 1902.

BOLTON—*(Continued).*

Mere Hall Art Museum

Governing Body.—The Parks' Committee, appointed by the Town Council from its own members.

Staff.—Curator, Assistant Curator and one assistant.

Source of Income.—Rates.

Time and Terms of Admission.—10 a.m. to dusk. Admission free.

Number of Visitors.- About 36,000. Number ascertained by turn-stiles.

Loan of Pictures.—Pictures sometimes lent to local exhibitions.

Publications.—Annual Report. Art Catalogue.

Curator.—W. W. MIDGLEY, F.R.Met.S.

Mere Hall Art Gallery was founded in 1890 by J. P. Thomasson, Esq., who purchased the mansion, and offered it to the Corporation, and afterwards defrayed the cost of its conversion into an art gallery.

BOOTLE.

Free Library and Museum.

Governing Body.—Free Library, Museum and Technical Instruction Committee, proceedings controlled by Town Council.

Staff.—Librarian and Curator, Sub-librarian, one senior and three junior assistants, janitor.

Source of Income.—Library Rate (1d.). This yields £2000.

Nature of Collections.—Art, Natural History, Commercial and Industrial. The collections contain several rare birds, a collection of fossil footprints from Cheshire and Hessberg sandstones, and a large cabinet of European beetles, specimens numbered and catalogued.

Times and Terms of Admission.—9 a.m. to dusk on every week-day (Bank Holidays excepted). Admission free.

Number of Visitors.—About 24,000 annually. Number ascertained by counting.

Lectures.—Museum addresses are given during the winter months. Each address is illustrated by lantern slides and by objects exhibited in either the permanent or loan collections.

Loan of Collections or Pictures.—Specimens lent to school teachers for object lessons. Pictures are not lent.

Working Expenses.—From £200 to £300 spent out of Library Rate for museum.

Exhibition Space.—Natural History Room, 64ft. 6in. × 26ft.
Commercial and Industrial, 32ft. 6in. × 32ft. 6in.
Art Room, 43ft. 6in. × 26ft.
Geological Museum, 64ft. 6in. × 26ft.

Publications.—"Handy Guide to the Birds in the museum," "Notes on copies of famous Paintings and Sculptures in the Bootle Museum," "Bootle Free Library, Museum and Technical School Journal" (Quarterly).

Curator and Librarian.—CHAS. H. HUNT.

BRADFORD.

Bradford Art Gallery and Museum.

Governing Body.—A commi tee of the Bradford C'o poration.

Staff.—Secretary and Curator, Assistant Secretary and Curator, two caretakers.

Source of Income.—Produ&t of farihing ra e.

Nature of Collections.—Art.

Time and Terms of Admission.—Open in summer 10 a.m to dusk In winter—Mondays, Thursdays, and Saturdays, 10 a.m. to 9 p.m. Other week-days, 10 a.m. to dusk. Sundays, 6 p.m. to 9 p.m.

Number of Visitors.—About 360,000 annually. Registered by turn-stile.

Lectures.—Occasional le&tures on art and literature are given.

Loan of Collections or Pictures.—Pi&tures occasionally lent to other municipal galleries.

Working Expenses.—About £1,200 per annum.

Exhibition Space—One gallery, 112ft. × 40ft. Sculpture and show-cases on the floor, walls hung with pi&tures.

Publications.—Special catalogues are prepared to meet variations in the exhibits which are periodically changed.

Curator.—Butler Wood.

BRADFORD—*(Continued)*.

Cartwright Memorial Hall.

In the month of May, 1898, the Right Honourable Lord Masham offered to the City of Bradford, through His Worship the Mayor, the sum of £40,000 for the erection of an Art Gallery and Museum, which should serve as a memorial of Dr. Edmund Cartwright, the inventor of the power-loom and wool-combing machine. This magnificent offer was gladly accepted on behalf of the corporation, and Lord Masham's condition, that the building should occupy the site of his old home in Lister Park, was readily agreed to. Competitive designs for the proposed building were invited, and in response 115 sets of drawings were submitted from various parts of the country. Mr. Alfred Waterhouse, R.A., was appointed to adjudicate upon the designs, and after careful consideration he gave the first place to that submitted by Messrs. Simpson and Allen, of London. This was unanimously adopted by the city council, and tenders for carrying out the work were invited. Unfortunately, when these were opened it was found that owing to the increase in the price of labour and material the original estimate was exceeded to the extent of £15,000. When, however, the position of affairs was placed before Lord Masham, he generously offered to defray half the additional cost, and promptly placed the sum of £7,500 at the disposal of the council, thus making a total gift of £47,500 for this purpose. The building is progressing steadil and will probably be opened in the spring of 1904.

Dimensions of the principal rooms.

Art Gallery, one large room, 88 ft. × 28 ft.
,, ,, 72 ft. × 28 ft.
,, one room, 51 ft. × 34 ft.
,, ,, 30 ft. × 28 ft.
,, ,, 30 ft. × 28 ft.
Museum, one large room, 88 ft. × 28 ft.
,, ,, 72 ft. × 28 ft.
,, one central hall, 57 ft. × 28 ft.

BRIGHOUSE.

Victoria Free Public Library and Museum.

Governing Body.—Free Library and Museum Committee, composed of councillors and non-councillors.

Staff.—One curator.

Source of Income.—Library rate.

Nature of Collections.—Natural history, coins, and miscellaneous; also a special collection illustrating local geology. The latter contains type specimen of *Strepsodus sulcidens*.

Time and Terms of Admission.—Open free daily, from 9 a.m till dusk

Exhibition Space.—Two rooms, having an area of 636 square feet. All wall space occupied by cases. No cases in centre of room.

BRIGHTON.

Brighton Public Museum.

Governing Body.—The Town Council, assisted by an advising committee.

Staff.—One Curator, one sub-Curator, one assistant, two constables

Source of Income.—Special Rate.

Nature of Collections.—Natural History, Ethnology and Archæology. The first department contains (*a*) the Willett Collection of Chalk Fossils; (*b*) the Holmes Collection of Wealden Fossils; (*c*) the Griffith Collection of Cambridge Greensand Fossils; (*d*) the Davidson Collection of Paris Tertiary Fossils and (*e*) the Roper Collection of Sussex Plants.

Time and Terms of Admission.—Open every week-day, except Christmas day and Good Friday, from 10 a.m. to dusk.

Number of Visitors.—Not ascertained.

Lectures.—A public lecture given every week.

Exhibition Space.—One room devoted to British Fossils (arranged stratigraphically), four rooms to Natural History, four rooms to Archæology, Ethnology and Geology, two galleries to Natural History.

Publications.—Penny Guide-book to museum.

Curator.—JOHN MINTO, M.A.

BURSLEM.

Wedgwood Institute.

Governing Body.—The library committee under the town council.

Staff.—Honorary curator, secretary, caretaker, and attendant.

Source of Income.—Library rate.

Nature of Collections.—The Hulme collection of Wedgwood, early Staffordshire and contemporary ware; the Woodall bequest of Pictures and Modern Pottery; and a Loan Collection from the Board of Education.

Times and Terms of Admission.—Open on Mondays and Saturdays, 10 a.m. to 9 p.m.; and on other week-days, 10 a.m. till dusk. Admission free.

Number of Visitors.—20,870 in 1901. The museum was closed the the whole of May and part of June.

Lectures.—Gilchrist lectures have been held here during several years.

Working Expenses.—The free library rate produced £591. The amount of this devoted to museum expenses was £179.

Exhibition Space.—Amounts to 166 square yards, entirely devoted to art collections.

Hon. Curator.—THOS. HULME, J.P., C.C.

BURY.

Bury Art Gallery.

Governing Body.—The Art Gallery Committee (for the corporation).

Staff.—One curator, one assistant, one attendant in cloak-room, one floor polisher, and cleaners.

Source of Income.—A halfpenny rate. This produces about £500.

Nature of Collections.—Oil and water-colour paintings, statuary, engravings, Wedgwood, and bronzes.

Time and Terms of Admission.—Tuesday and Saturday, 10 a.m. to 9 p.m.; Friday, 2 p.m. to 8 p.m; Monday, Wednesday, and Thursday, 11 a.m. to 8 p.m. in summer season (Apr. 1 to Sept. 30); and 11 a.m. to 4 p.m. in winter season (Oct. 1 to March 31); Sunday, 2 p.m. to 5 p.m. throughout the year. Admission free.

Number of Visitors.—From Oct. 9, 1901 (the date of opening), to October 8, 1902, 142,873.

Lectures.—Only one has been given so far, but others are in contemplation.

Loan of Collections or Pictures.—Pictures are lent out, except those in "The Wrigley Collection."

Exhibition Space.—Five galleries and two halls, varying in size from 96 ft. × 32 ft. to 38 ft. × 22 ft.

Publications.—Illustrated Art Gallery Catalogue (94 pp.), price 6d. Handbook to "*Liber Studiorum*," by the Curator, price 2d.

The gallery contains some of the best known pictures of artists of the 19th century, and especially of the earlier part. Among the painters whose work is well represented are—Landseer, Collins, Bonheur, Constable, David Cox, Creswick, Gilbert, Goodall, Hunt, Linnell, Mulready, Briton Riviere, Sant, Turner, Watts, Cattermole, Calcott, De Wint, Duncan, J. Faed, T. Faed, Maclise, Prout, Paton, and Topham. The collections include Turner's *Liber Studiorum* and examples of Wedgwood's art.

BURY ST. EDMUND'S.

Moyses Hall, Bury St. Edmund's.

Governing Body.—Moyses Hall Committee, composed of members of the town council.

Staff.—One curator and secretary, one assistant.

Source of Income.—(1) Grant from the Borough Fund, and (2) admission money. There is no special museum rate levied.

Nature of Collections.—Chiefly objects found in Bury St. Edmund's and the adjacent villages. Include natural history collections, coins, weapons, prints, local books, and a fine series of ethnological specimens from the South Sea Islands. East Anglian birds, British Coleoptera, flint implements (especially from Suffolk), are good.

Time and Terms of Admission.—Monday, 2 p.m. to 5 p.m.; Tuesday, Wednesday, and Friday, 10 a.m. to 1 p.m. and 2 p.m. to 5 p.m.; Thursday and Saturday, 10 a.m. to 1 p.m. and 2 p.m. to 9 p.m. Admission 6d., but free on Thursday and Saturday.

Number of Visitors.—6405 in 1901-2.

Loan of Collections and Pictures.—No loans made as a rule, but a small collection was lent to the Norwich Art Exhibition in 1902.

The collections are housed in an almost unique specimen of the domestic architecture of the 12th century. They are rich in locally-found Romano-British, Anglo-Saxon, and mediæval remains.

CAERLEON.

Caerleon Museum.

Governing Body.—Monmouthshire Antiquarian Society.

Staff.—Secretary (J. F. Mitchell, Esq., J.P.), Assistant Secretary (Miss E. C. Williams), and Curator (Mr. E. Davies).

Source of Income.—Annual subscriptions of members, and donations of visitors.

Nature of Collections.—The exhibits consist for the most part of Roman antiquities, mainly the work of the second Augustan Legion, stationed at Caerleon for about 400 years. They include inscribed tablets, tiles and mosaic pavements, pottery, bronze implements, personal ornaments, and carvings.

Special Collections.—A collection of Roman coins, mostly found in the locality, representative of almost every Roman emperor from Trajan to the evacuation of Britain.

Times and Terms of Admission.—10 a.m. to 5 p.m., on week-days only. Admission free on application for the key at the schoolhouse. On Bank Holidays an attendant is on duty during the above hours, and the door is kept open. Museum closed on Good Friday and Christmas Day.

Lectures.—No public lectures are given, but papers are read at the meetings of the Antiquarian Society.

Income and Expenses.—About £12 per annum.

Exhibition Space.—About 30 ft. × 15 ft. with a crypt of similar dimensions.

Publications.—"Isca Silurum," compiled by Mr. Lee (out of print)—Journal of the Monmouthshire Antiquarian Society.

General Information.—Built about 50 years ago to receive Roman remains from the locality (Isca Silurum of the Romans) and from Caerwent (Venta Silurum).

Curator.—Mr. E. Davies.

CAMBORNE.

Museum of the Camborne Mining School.

Governing Body.—Committee of the Mining School.

Staff.—Teacher of Mineralogy and 3 assistants.

Source of Income.—Fees and grants only.

Nature of Collections.—Minerals.

Special Collections.—The "Taylor" collection of minerals.

Times and Terms of Admission.—9-30 a.m. to 9-30 p.m. (to 8 p.m. on Saturdays). Admission free.

Number of Visitors.—About 100 visitors from the general public annually; but the museum is largely used by students.

Lectures.—Eight or nine Saturday evening lectures, to which admission is free. These lectures are not necessarily on subjects connected with the museum.

Exhibition Space.—About 1,000 sq. ft. entirely devoted to the exhibition of Minerals.

Publications.—School Magazine, published quarterly.

General Information.—Museum primarily intended for the use of students in mineralogy of whom there are about 200.

Curator.—Mr. J. J. Beringer.

CAMBRIDGE.

University Museum of Zoology.

Governing Body.—Museums and Lecture Rooms Syndicate.

Staff.—Alfred Newton, M.A., F.R.S., Professor of Zoology and Comparative Anatomy. Superintendent—S. F. Harmer, Sc.D., F.R.S.; Strickland curator of ornithology, H. Gadow, M.A.Ph.D., F.R.S., curator in zoology, D. Sharp, M.A., F.R.S.; scientific assistant, L. Doncaster, B.A.; two assistants for mounting skeletons, making spirit preparations, &c., and a boy.

Source of Income.—Annual grant from the University, paid through the Museums and Lecture Rooms Syndicate.

Nature of Collection.—Zoological.

Special Collections.—The Strickland, Selby, and Hepburn collections of birds. Special mention should be made of the ornithological collections from Madagascar and the Mascarene islands (including valuable series of bones of the dodo and solitaire), New Zealand and the Sandwich islands; and of Professor Newton's collection of the eggs of Palæarctic birds. Among the mollusca are the collections of Robert MacAndrew, S. P. Woodward, and Miss Jane Saul. The foraminifera include H. B. Brady's collection. The insect collections contain those of the Cambridge Philosophical Society, the Selby collection, the Brown (J. & T. Brown) collection, and G. R. Crotch's coleoptera and diptera; the polyzoa comprise a considerable part of Miss E. C. Jelly's collection. The museum contains most of the marine invertebrata collected by J. S. Gardiner, in Funafuti and Rotuma, and in the Laccadives and the Maldives; many of the specimens collected by A. Willey, in the Loyalty islands and New Britain; the collections recently made in the Malay Peninsula by members of the "Skeat" Expedition, and many specimens from Borneo sent by Dr. C. Hose.

Times and Terms of Admission.—9 a.m. to 6 p.m. on week-days, or to dusk in winter. Admission free.

Lectures.—No public lectures in the strict sense of the term; but numerous courses of lectures more or less connected with the museum are given by members of the zoological teaching staff of the University.

Loan of Collections.—None such are made, but specimens are occasionally entrusted to specialists for description or comparison.

Income and Expenses.—£180, exclusive of stipends and wages. No rent or rates have to be paid; gas, water and heating are paid for separately. The chief expenses are specimens, books, glass, spirit, materials for mounting specimens and carriage of parcels. Special grants are made from time to time for new cabinets or show cases, or for other items of extraordinary expenditure.

Exhibition Space.—(i) Main Museum, ground floor, 100 ft. × 42 ft., used for exhibition of mammals; gallery round four sides occupied by fishes, amphibians, reptiles, and preparations of viscera and other organs of mammals. (ii) Annexe, two floors, each 90 ft. × 10 ft., occupied by invertebrates. (iii) Bird Room, 42 ft. × 40 ft., devoted entirely to birds. Besides these there are several store-rooms, preparation rooms, and rooms for the museum staff.

Publications.—An Annual Report is published.

General Information.—The collections are intended primarily for teaching purposes and illustrate the more important facts in zoology. In the vertebrata, special attention is given to the osteological exhibits of recent and extinct forms. There is a large number of preparations in spirit illustrating the structure of both vertebrates and invertebrates.

Superintendent.—S. F. Harmer, Sc.D., F.R.S.

CAMBRIDGE *(continued)*.

Mineralogical Museum, Cambridge.

Governing Body.—A Syndicate to which the authority is delegated by the Senate of the University.

Staff.—A director (the professor of mineralogy), and an assistant director (demonstrator in mineralogy).

Source of Income.—University chest and students' fees.

Nature of Collections.—Minerals and meteorites,

Special Collections—Abraham Hulme collection, the Carne collection, the Wiltshire collection, and the Brooke collection—The last is kept separate.

Times and Terms of Admission.—Open daily (except for a few days in vacation) 10 a.m. to about 4 p.m. Admission free.

Lectures.—No public lectures are given. There are courses in accordance with the university curriculum for students taking the subject of mineralogy in the Natural Sciences Tripos.

Exhibition Space. A gallery about 120 ft. × 24 ft. for the display of specimens. About an equal floor space is divided into lecture rooms and laboratories.

Director.—Professor Lewis.

CAMBRIDGE *(continued)*.

Pathological Museum, University of Cambridge.

Governing Body.—The Museums and Lecture Rooms Syndicate.

Source of Income.—Fees and University Chest.

Nature of Collections.—Illustrative of pathology, surgery, and medical jurisprudence.

Special Collections.—The Humphrey collection (surgical).

Times and Terms of Admission.—Probably will be 10 a.m. to 4 p.m. Admission free.

General Information.—The museum is now in course of erection, and will be ready about the middle of 1903. It will be a handsome building and well adapted for its purpose. The specimens are at present stored in temporary premises. The museum is intended mainly for teaching purposes, but it will be open to the public as was the old museum.

Director. (For the present) Professor G. Sims Woodhead.

CAMBRIDGE *(continued)*.

Botanical Museum.

A Museum of Botanical Specimens and Preparations is attached to the Botanical Laboratories, and is primarily intended for the use of students and investigators in these laboratories. Access to the museum may be obtained, under the superintendence of the Professor, by students and others who are interested in botany.

Director.—Professor H. Marshall Ward, D Sc., F.R.S.

Assistant Curator.—Mr. R. H. Yapp, M A. St. John's.

CAMBRIDGE *(continued).*

University Museum of Archaeology and of Ethnology.

Governing Body.—The Antiquarian Committee, composed as follows:—Chairman, the Vice-Chancellor; other members *(a)* the Director of the Fitzwilliam Museum and two members of the Fitzwilliam Museum Syndicate (appointed by the Syndicate); *(b)* the President of the Cambridge Antiquarian Society and two members of the Council of the Cambridge Antiquarian Society (appointed by the council of that body); *(c)* three other persons to be elected by Grace, one of whom retires by rotation at the end of each year; Secretary, the Curator of the Museum.

Staff.—A curator, one assistant, and one attendant.

Source of Income.—Museum maintained by the University. Specimens are bought with money privately subscribed to a Museum Accessions Fund.

Nature of Collections.—Archaeology (local and general); Ethnology; Folk-lore; Books (archaeological, ethnological, geographical, philological, &c.) Specially noteworthy are the collections of prehistoric objects (local, Irish, Continental, and Egyptian); the local Roman and Saxon antiquities, the latter including an exceptionally fine set of cinerary urns, the Foster Bequest of Antiquities (British and Continental); the extensive ethnological collection from the Pacific, with its unrivalled Fijian and Torres Straits series; and the Skeat Malay collections. The collections of the Folk-lore Society are housed in the Museum.

Special Collections.—*(a) Archaeological:* Webb, Inskip, Knipe, and Deck cs. (local antiquities), forming part of the Camb. Antiq. Society's collection. Hughes and Jenkinson c. (Roman, local): Barratt c. (Roman, French, Italian); Foster Bequest (Prehistoric, Lacustrine, Saxon, &c., British and Continental): Murray c. (Stone and Bronze age, Irish); Petrie, Bevan, and Hügel cs. (stone implements, pre-dynastic pottery, &c., Egypt); Feilden and Cave cs. (stone implements, W. Indian). *(b) Ethnological;* Gordon, Maudslay, and Hügel cs. (Fiji, Tonga); Scratchley, Selwyn, Brady, Macgregor, Gardiner, Stirling, and Still cs. Australia, S. Sea Islands); Cambridge Torres Straits Expedition c. (Torres St, N. Guinea, Borneo); Hose and Shelford cs. (Borneo); Temple c. (Andaman Is.); Man c. (Nicobar Is.): Gardiner c. (Maldives); Skeat cs. (Malay Peninsula); Swettenham c. (British Guiana): Wordsworth Poole c. (Nigeria, &c.).

CAMBRIDGE *(continued).*

University Museum of Archaeology and of Ethnology. —*(continued.)*

Times and Terms of Admission.—During the summer, open from 10 a.m. to 6 p m. (in the long vacation, 10 to 5); in winter (Sept. 1 to April 30th), from 10 a m. to 4 p.m. Admission free.

Lectures.—During each term lectures, chiefly on ethnological subjects, are given by Dr. A. C. Haddon (University lecturer on Ethnology). These are often accompanied by lantern illustrations and museum demonstrations. The curator gives occasional lectures, and lectures are also given in the museum buildings under the auspices of the Cambridge Antiquarian Society.

Income and Working Expenses.—The University allows an annual grant of £100 for the maintenance of the museum, and occasional grants for furniture and fittings. No salaries are included in this amount.

Publications.—Annual Report of the Antiquarian Committee to the Senate. Catalogues of—(i) the Walter K. Foster bequest, (ii) the Skeat Ethnological collection, (iii) the Murray Collection of Irish Antiquities, (iv) the Starr Collection of Mexican Folk-lore, (v) the Temple Collection of Manufactures of the Andaman Islanders, (vi) the Man Collection of Manufactures of the Nicobar Islanders, (vii) Local collection of Roman pottery.

General Information.—The aim of the museum is to present to the student an unbroken record of man's civilization as exemplified in his manufactures. It owes its existence to the Cambridge Antiquarian Society, which offered its collections and library to the University on condition that a suitable museum should be built for their reception. The collections have long since outgrown the existing accommodation. In 1897 the University assigned an excellent site for a new Museum building, but this, in the present state of the University funds, will long remain vacant, unless private aid is forthcoming.

Curator.—Baron Anatole von Hügel, M.A. (Trinity College.)

CAMBRIDGE *(continued)*.

The Woodwardian Museum.

Governing Body.—The Woodwardian Professor of Geology, and the Museums and Lecture Rooms Syndicate.

Staff. - A director, one curator and three attendants.

Source of Income.—Original endowment and annual allowance from the University

Nature of Collections.—Geological, under the heads—(i) Stratigraphical, (ii) Petrological, (iii) Economic Geology, (iv) Dynamical, (v) Palæontological, (vi) Historic collections, (vii) Students' collections. There is also a valuable Library.

Special Collections.—A list of these will be found in Woods' Catalogue of Type Fossils in the Woodwardian Museum. See also Cambridge University Calendar (1902-3), p. 676.

Times and Terms of Admission.—General Public: 10 a.m. to 4 p.m. daily; Students: 9 to 5—except for a few days at Christmas and Easter, and a fortnight in September. No charge for admission.

Lectures.—These are given only to members of the University by the teaching staff, which consists of—Woodwardian Professor of Geology (T. McKenny Hughes, M.A., F.R.S.); Assistant to Professor (F. R. C. Reed, M.A.); Lecturer in Geology (J. E. Marr, M.A., F.R.S.); Lecturer in Palæozoology (H. Woods, M.A.); Demonstrator in Petrology (A. Harker, M.A., F.R.S.); Demonstrator in Palæobotany (E. A. N. Arber, M.A.); Assistant Demonstrator in Geology (Miss Gertrude Elles, Geoffrey Fellow of Newnham College).

Loan of Collections.—Specimens are lent to persons engaged in private research, and collections out of the duplicates are frequently given to public schools and other institutions.

CAMBRIDGE (*continued*).

The Woodwardian Museum (*continued*).

Income and Working Expenses.—The grant made by the University is £400 a year, of which £279 6s. od. is paid in wages; £50 is assigned for specimens; and the remainder, £70 14s. od., is allowed for repairs, ordinary fittings, materials, books, maps, stationery, binding, &c.

Publications—These are so numerous that a full list cannot be given here. Among them are 1, Catalogues of the English Fossils in the Collection of T. Woodward, M.D. (published early in the 18th century); 2, A. Sedgwick and F. M'Coy, Synopsis of British Palæozoic Rocks and Fossils (1851-55); 3, J. W. Salter, Catalogue of the Cambrian and Silurian Fossils in the Geological Museum of the University of Cambridge (1873); 4, H. G. Seeley, Index to the Aves, Ornithosauria, and Reptilia from the Secondary System in the Woodwardian Museum (1869); 5, H. Woods, Catalogue of the Type Fossils in the Woodwardian Museum, Cambridge (1891, with additional list, Geol. Mag., 1893 p 111); 6, H. Woods, Catalogue of the Fossils in the Students' Stratigraphical Series, Woodwardian Museum, Cambridge (Second Edition, 1900). Annual Reports (containing lists of additions, &c.), are published by the Syndicate in the "Cambridge University Reporter," in May and June.

General Information.—The collections are on the point of being removed to a much larger building in Downing Street—The Sedgwick Memorial Museum.

Director.—F. R. C. Reed, M.A. (Trin. Coll.).

Curator.—H. Keeping.

CAMBRIDGE *(continued)*.

Fitzwilliam Museum.

Governing Body.—A Syndicate of eight members of the Senate, with the Vice-Chancellor as chairman. Two members retire annually.

Staff.—A director, one principal assistant, one assistant, four attendants, a general servant and fireman.

Source of Income.—Lord Fitzwilliam's bequest.

Nature of Collections.—Pictures, engravings, manuscripts, music, Egyptian, Cypriote, and Roman Antiquities. There is also a library of books on art and archæology.

Special Collections.—The Leake collection of coins and vases; the Pendlebury collection of printed music; the Fitzwilliam pictures, and the Mesman collection of pictures.

Times and Terms of Admission.—September to April, 10 to 4; May and June, 10 to 6; July and August, 10 to 5. Admission free.

Number of Visitors.—42,000—45,000 annually.

Lectures.—The lectures of the Slade Professor of Fine Art are open to the public.

Income and Expenses.—Income about £2,900, working expenses (including those of the Museum of Classical Archæology) about £2,250.

Publications.—Illustrated Handbook to the Museum, by Mr. H. A. Chapman; Short Catalogue of the Pictures, by Mr. Sidney Colvin; Illustrated Catalogue of the Pictures, by Mr. Earp; Catalogue of the Engraved Gems, by Dr. J. H. Middleton; Catalogue of the Engraved works of Albert Durer, by Mr. C. H. Middleton-Wake; Catalogue of the Fitzwilliam Collection of Music, by Mr. J. A. Fuller Maitland and Dr. A. H. Mann; Catalogue of the Egyptian Antiquities, by Dr. E. A. Wallis Budge; Catalogue of the Manuscripts, by Dr. M. R. James; Catalogue of the Greek Vases, by Professor E. A. Gardner.

General Information.—The Museum of Classical Archæology in Little S. Mary's Lane is in every respect a portion of the Fitzwilliam Museum. There are four galleries, containing about 700 casts, from the Archaic period down to the Græco-Roman period. Dr. James is the Director, and there is a resident assistant and one attendant.

Director.—Dr. M. R. James.

CANTERBURY.

Royal Canterbury Museum.

Governing Body.—Museums Committee of the Corporation of the City of the County of Canterbury.

Staff.—Honorary curator, librarian, and two assistants.

Source of Income. – Rates.

Nature of Collections.—Art and Natural History; the latter specially illustrative of the Natural History and Antiquities of Kent. A specially good collection of English Pottery and Porcelain.

Times and Terms of Admission.—10 a.m. to 10 p.m. Admission free.

Number of Visitors.—About 100,000 annually.

Income and Working Expenses.—£850 a year, devoted to the museum and the free library.

Exhibition Space.—One large hall and two rooms devoted to art, two rooms to natural history.

Publications.—Catalogue of stained glass in the museum. (Other publications in preparation.)

General Information.—The museum was opened in 1825. In 1857, the city adopted the Free Libraries Act. The new buildings were erected at a cost of £16,000; for this the city is largely indebted to the munificence of private donors.

Hon. Curator.—F. Bennett-Goldney, F.S.A.

Librarian.—Henry Mead.

CARDIFF.

The Welsh Museum of Natural History, Arts, and Antiquities.

Governing Body.—A committee of the Corporation, aided by a number of gentlemen (not members of the Town Council) who are appointed by the Corporation to attend the meetings of the committee in a consultative capacity.

Staff.—A curator, an assistant, two attendants, and a messenger.

Source of Income.—An amount from the rates equivalent to a rate of ½d. in the £, under the provisions of the Museums and Gymnasiums Act of 1891.

Nature of Collections.—Fine Art: oil paintings, mostly belonging to the Menelaus bequest (1883); water-colour drawings, mostly presented by the Executors of the late James Pyke Thompson, Esq. (1898), with a view to the formation of a collection to illustrate the English school of the art; and a few examples of sculpture by eminent Welsh sculptors. Antiquities: local pre historic and Roman remains; a collection of casts of the pre-Norman sculptured stones (crosses, &c.) of Wales is being formed to fill a special hall in the proposed new museum buildings, as also a collection to illustrate old-fashioned Welsh domestic life. Ceramics: a large collection of Swansea and Nantgarw porcelain and of Swansea earthenware; a representative collection of old English pottery is being formed, to be followed by a similar series of old English porcelain. Natural history: a large collection of British fossils, local and general; a collection of the birds of South Wales; the Vivian Collection of British macro-lepidoptera; and other minor collections.

Times and Terms of Admission.—Monday, Tuesday, and Thursday, from 10 a.m. to 5 p.m.; Wednesday and Saturday, 10 a m to 9 p.m.; Sunday, 2.30 p m to 5 p m.; closed on Friday. Admission free.

Number of Visitors.—Annual average for last few years, about 90,000.

Income and Working Expenses.—The income from rates for the year ending March 31, 1902, was £1880. General working expenses, £850; new furniture, £56; purchase of specimens, £467. The balance was devoted to the furnishing fund for proposed new buildings.

Exhibition Space.—The building of a new museum is in contemplation. In the meanwhile the collections are temporarily housed in various rooms in the Central Library and elsewhere.

Publications.—Guide-books to the collections as a whole, and to various sections of them, have from time to time been issued; but all, with the exception of one sectional guide, are out of print. Four pages in the Public Library Journal the quarterly magazine of the Cardiff Free Libraries and the Welsh Museum—are devoted to museum matters.

General Information.—For several years past preparations have been made for the erection of a new museum in Cathays Park, and a site of two acres has been allotted for this purpose After much delay there is good reason for believing that the building operations will be commenced within a few months The first portion to be erected will cost about £25,000, towards which the Executors of the late James Pyke Thompson, Esq. have promised £6000. The present efforts of the Committee are directed towards making the different collections reasonably complete in time for their installation in their future home.

Curator—John Ward, F.S.A.

CARLISLE.

Tullie House Museum, Carlisle.

Governing Body.—Committee elected by the Town Council to administrate the Public Library, Museum, Art Gallery and Schools of Science and Art in Tullie House.

Museum Staff.—Director (Dr. F. H. Newman), Curator (Mr. L. E. Hope).

Source of Income.—Rates (½d. in the pound).

Nature of Collections.—I Archæological. *(a)* Prehistoric Remains, *(b)* Roman Remains, *(c)* Mediæval Relics, *(d)* Neo-archaic Objects. II. Natural History. *(a)* British Birds, Mammals and Insects, *(b)* Fossils, *(c)* Minerals. III. Relics of Old Carlisle. IV. Art Collection (including a Loan Collection from South Kensington).

Special Collections.—A collection representing the Avi-fauna of the Solway.

Times and Terms of Admission.—Daily from 11 a.m. to dark, but on Thursday and Saturday open to 9 p.m. Admission free.

Lectures.—Lectures are given by various learned societies which have their headquarters on the museum premises, viz.: the Carlisle Literary and Scientific Society, the Society of Arts and Crafts, the Carlisle Microscopic Society, the Carlisle Photographic Society, the Carlisle Teachers' Association, and the Carlisle Natural History and Entomological Society.

Working Expenses.—Income derived from ½d. rate brings in £424 3s. 3d., expenditure £404 10s. 9d.

Publications.—A Guide to the Museum, by Chancellor Ferguson (sold at 1d. per copy); Annual Report; Catalogues; and Prospectus of Classes held in connection with the museum.

General Information.—The collections are housed in a pile of buildings of which the nucleus is a fine old mansion, Tullie House (built 1689), purchased by public subscription in 1890 at the suggestion of Mr. C. J. Ferguson. In the course of the excavations made during the erection of the newer buildings, a large number of interesting antiquities were discovered, and these are kept as a separate collection in the museum.

Director.—Dr. F. H. Newman.

CHELMSFORD

Has good collections of Shells and Fossils, and of local Roman relics These are at present lodged in three small rooms, but the Corporation is about to build a museum on a site recently purchased for that purpose. A small Library is attached to the collections.

CHESTER.

The Grosvenor Museum, Chester.

Governing Body.—Six Trustees and a committee of 24 members elected annually from three societies. (*a*), Natural Science Society. (*b*), Archæological Society and (*c*), Schools of Science and Art and Technical Instruction.

Staff.—One Curator and four attendants.

Source of Income.—Chiefly the annual subscriptions of the three societies mentioned above,

Nature of Collections.—I. Local Collections. illustrating the fauna, flora and Archæology of Cheshire and North Wales. II. Collections of minerals, fossils, materia medica, &c., for the use of students. III. Pictures and other works of art from the National Gallery and the Board of Education.

Special Collections.—(i.) An extensive collection of Roman inscribed stones; (ii.) Life-history groups of birds; (iii.) Life-history series of injurious insects; (iv.) A number of Kidston's type specimens of Carboniferous Limestone plants; (v.) A large collection of Labyrinthodon footprints from the Lower Keuper Sandstone.

Times and Terms of Admission.—Open daily to the public from 10 a.m. to 5 p.m. Admission 3d. Free on Wednesdays. Members of the local societies and students have free admission daily from 10 a.m. to 9.30 p.m.

Visitors.—10,000 to 12,000 annually. Visits of students amount to 100,000.

Lectures.—Public lectures are occasionally given.

Loan of Collections or Pictures.—Archæological specimens are occasionally lent to local exhibitions, and life-history series of injurious insects are lent to illustrate lectures on horticulture.

Income and Working Expenses.—Income for year ending April 30th, 1902, £660, 9s. Expenditure during same year, £648, 10s.

Exhibition Space.—Natural History, 100 ft. × 63 ft.; Archæology, 66 ft. × 36 ft.; Art, 63 ft. × 24 ft.; General, 57 ft. × 27 ft. The remainder of the building is devoted to Schools of Science and Art.

Publications.—Annual Report and Proceedings of the Chester Society of Natural Science. Annual Proceedings of the Chester Archæological Society. Catalogue of Roman Remains.

General Information.—The present Museum was opened in 1886 by the late Duke of Westminster, K.G., who was President of the Institution till his death in 1899. The building was erected at a cost of £20,000. Public subscription supplied the greater part of the funds, but it was mainly due to the generosity and personal exertions of the Duke of Westminster that those interested in the work were able to see its completion. Three societies co-operate in the working of this museum—the Chester Society of Natural Science (founded by Charles Kingsley in 1871, now numbers over 1000 members), the Chester and North Wales Archæological Society (founded 1849), and the Chester Schools of Science and Art and Technical Instruction. Each Society contributes a share *pro rata* towards the maintenance of the Institute.

Curator.—ROBERT NEWSTEAD, A.L.S., F.E.S., Hon. F.R.H.S.

CHICHESTER.

Museum of the Chichester Institute.

Governing Body.—Committee of the Institute

Staff.—Hon. Curator (J. Anderson, Esq.), Hon. Deputy-Curator (E. E. Street, Esq., F.S.A.), three Hon. Assistants (the Rev. F. H. Arnold, LL.D., F.S.A., Dr. F. V. Paxton, M.A., F. Anderson, Esq.).

Source of Income.—The general income of the Institute. There is no special museum fund.

Nature of Collections.—Antiquities (local and general), fossils, minerals, a small collection of coins, and a large collection of birds.

Times and Terms of Admission.—Open daily, from 10 a.m. to 4 p.m. Admission free, for members of the Institute, 3d. a head for the general public.

Visitors.—About 450 to 600 non-members annually. No record kept of visits made by members.

Loan of Collections or Pictures.—Objects are lent from time to time to the Art School, at the request of the Art Master, who gives a receipt for them.

Hon. Curator.—Joseph Anderson.

CIRENCESTER.

The Corinium Museum.

Governing Body.—The museum is the property of Earl Bathurst.

Staff.—An Hon. Curator. The museum is attended to by the lodge-keeper of Lord Bathurst's house.

Nature of Collections.—Mainly antiquities from Cirencester and its immediate neighbourhood; there are a few antiquities from Gloucester and a small collection (kept apart) of illustrative antiquities from abroad, chiefly lamps, coins and glass vessels.

Times and Terms of Admission.—Museum open daily (Sundays excepted), 9 a.m. to 6 p.m., or to dusk. Entrance by lodge to Lord Bathurst's house. Admission free.

Publications.—Guide to the Museum, by Professor Church, price sixpence.

General Information.—The museum was built by Henry George, 4th Earl of Bathurst, for the reception of the Roman pavement discovered in 1849, in Dyer Street, Cirencester. It has no funds or endownment.

Curator.—CHRISTOPHER BOWLY.

COLCHESTER.

Colchester Corporation Museum.

Governing Body.—Museum Committee of the Corporation and three members of the Essex Archæological Society (elected by the Society).

Staff.—Honorary Curator (Alderman Laver, F.S.A.) and Curator (Mr. Arthur G. Wright).

Source of Income.—From the rates. The Corporation has adopted the Museums Act. The Essex Archæological Society also contributes towards the curator's salary and general expenses.

Nature of Collections.—Local archæology (only Essex antiquities are collected). Two notable points are—a Collection of Late Celtic Pottery and a large and important Collection of British Coins (gold, silver, and bronze), from the earliest time to 43 A.D.

Special Collections.—The Joslin, Jarmin, and Taylor Collections of Colchester Antiquities (the first-named contains over 1200 specimens) and the Vint Bronzes.

Times and Terms of Admission.—Open daily throughout the year (except Sunday, Christmas-day, and Good Friday). April to September, 10 a.m. to 5 p.m.; October to March, 10 a.m. to 4 p.m. Admission free.

Number of Visitors.—About 26,000 enter their names in the visitors book annually.

Income and Working Expenses.—The ½d. rate produces about £280 per annum, and the expenditure is kept within this amount and the grant from the Essex Archæological Society.

Exhibition Space.—The collections are housed in the crypt of the chapel of the Norman Castle, in the corridor leading thereto, and in two small rooms annexed.

Publications.—Catalogue of the collections. A new edition of this is in contemplation.

General Information.—The museum is contained in the remains of the Norman Castle, which the proprietor, the Right Hon. James Round, M.P., kindly lends for the purpose rent free. The Collection of Roman Antiquities is one of the finest in the kingdom; the glass, the burial groups of vessels, and the child burials, with their accompanying terra-cotta toys, are unsurpassed in Britain. The museum is at present undergoing re-arrangement, in preparation for the proposed new catalogue.

Curator.—Mr. ARTHUR G. WRIGHT.

CORK.

Queen's College, Cork, Natural History Museum.

Governing Body.—Council of Queen's College.

Staff.—The museum is under the management of the Professor of Natural History, who is assisted by a porter.

Source of Income.—The funds of the college (annual grant from the Government).

Nature of Collections.—Zoology, botany, geology (including palæontology), and mineralogy (including crystallography). The collections contain several local series. In addition, there are small archæological and ethnographical collections in rooms not generally open: also special museums in connection with medical subjects.

Special Collections.—The Harvey Collection of Munster Mammals, Birds, and Birds' Eggs; the Wright Collection of Irish Foraminifera; the Greenough Collection of Rocks.

Time and Terms of Admission.—Open daily, free.

Loan of Collections.—Specimens are not lent out.

Exhibition Space.—Two large rooms, one 101 ft. × 25 ft., devoted to zoology and botany: the other, 51 ft. × 25 ft., to geology and mineralogy.

General Information.—The museum is not worthy of the institution to which it is attached. There is no room set apart for study, and no preparation room. The exhibition rooms are very inadequately lighted. Besides this, the museum necessarily receives an insufficient amount of attention. The Professor of Natural History, under whose charge it is placed, has to lecture on biology and geology, and attend to the laboratory, without assistant or demonstrator; and the porter has to divide his attention between the laboratory and the museum.

Curator.—Professor MARCUS HARTOG.

CROYDON

Has collections of coins, minerals and local antiquities. The Council of the County Borough has decided to form a museum to be maintained out of the rates. The museum is to be housed in a portion of the mansion in the Grange Wood Park Recreation Ground, recently purchased by the Council.

There is at present a small Natural History Collection, which belongs to the Corporation, and a Loan Collection of Pictures and Prints. The coins and minerals are not yet placed in the museum.

DERBY.

Derby Natural History Museum.

Governing Body.—A Committee of the Corporation, with co-opted members.

Staff.—Curator and two attendants.

Source of Income.—Rates.

Nature of Collections.—General Natural History (types of all classes) and local Archæology.

Times and Terms of Admission.—Open daily, free, from 10 a.m. to 9 p.m.

Loan of Specimens.—None are lent.

Income and Working Expenses.—The penny rate for library and museum produces about £2,000; the sum required for the museum is taken out of this.

Publications.—A catalogue of the minerals.

General Information.—The museum is in connection with the free library and in the same building.

Curator.—W. CROWTHER.

DERBY *(continued)*.

Derby Corporation Art Gallery.

Governing Body.—A Committee of the Corporation, with co-opted members.

Staff.—Curator and one attendant.

Source of Income.—A sum voted by the Corporation.

Nature of Collections.—A small permanent collection of pictures: a large collection of Derby China; periodical exhibitions of pictures, generally three during the year.

Special Collections.—The Felix Joseph, Olivier, Boden, and Wheeldon Collections of Derby China.

Times and Terms of Admission.—Open 10 a.m. to 9 p.m.: free on Wednesday and Saturday; one penny on Monday, Thursday, and Friday: sixpence on Tuesday.

Number of Visitors.—38,445 in 1902.

Loan of Pictures.—None are lent.

Income and Working Expenses.—Annual deficit, £300 to £400.

Publications.—Catalogues of china and of periodical exhibitions.

General Information.—The Art Gallery is in a building adjoining the Free Library, and is under the same management.

DEVONPORT.

Devonport Museum.

Governing Body.—Museum Sub-Committee of the Public Library Committee.

Staff.—The Borough Librarian is curator of the museum.

Source of Income.—Part of penny rate.

Nature of Collections.—General Natural History, Ethnology, and Loan Collections from South Kensington. The Collections of British Birds, Insects, and Weapons are particularly good.

Times and Terms of Admission.—Open free from 10 a.m. to 9 p.m. on Wednesdays and Saturdays, and from 10 a.m. to 6 p.m. on other days.

Number of Visitors.—23,000 in 1902.

Income and Working Expenses.—Cannot be separated from those of free library.

Exhibition Space.—One large hall, 50 ft. × 40 ft., and a smaller room adjoining.

General Information.—Every object exhibited is fully labelled.

Curator and Librarian.—FRED. W. HUNT.

DEWSBURY.

Dewsbury Corporation Museum.

Governing Body.—The Town Council.

Staff.—Six Honorary Curators, of whom one (Alfred Ridgway, Esq.) acts as President.

Source of Income.—Rates and private donations.

Nature of Collections.—Natural History and Egyptian Antiquities.

Times and Terms of Admission.—Open daily (except Sundays), 9 a.m. to sunset. Admission free.

Lectures.—None are given.

Loan of Collections.—Specimens are not lent out.

Secretary.—M. L. RIDGWAY, S. John's House, Dewsbury.

DONCASTER.

The Doncaster Museum.

Governing Body.—The Mayor (R. Robinson, Esq.) and four other representatives of the Corporation, and four representatives of the Doncaster Scientific Society. Honorary Secretary, H. H. CORBETT, Esq.

Staff.—One Curator.

Source of Income.—There is no regular source of income. The Corporation and the Doncaster Scientific Society have granted sums to meet current expenses from time to time, and the former has purchased the Cottrell Clark Collection for the museum.

Nature of Collections.—Archæological, botanical, ethnological, geological, zoological, &c. Special effort is being made to render the local collection as complete as possible.

Special Collections.—(1) The Cottrell Collection, chiefly pre-historic and mediæval implements and ancient coins. (2) The Hawley Collection, chiefly geological specimens and Lepidoptera.

Times and Terms of Admission.—The museum has been open to the public free on Thursday afternoon and evening, from October to April. But latterly the collections have out-grown the space available for their accommodation, and the committee has been reluctantly compelled to close the museum temporarily.

Number of Visitors.—Number in 1902 was 859.

Lectures.—None given.

Loan of Collections, &c.—Some of the collections have been lent to the Doncaster Scientific Society for exhibition at the annual conversazione.

Exhibition Space.—Floor area, 24 ft. × 13 ft ; wall cases, 15 ft. × 9 ft. ; table cases, 19 ft. × 2 ft. ; four cabinets, with about 60 drawers.

General Information.—Some 15 or 16 years ago the Doncaster Microscopical and General Scientific Society (now the Doncaster Scientific Society) made an attempt to get a museum for the town, but the movement fell through. About three years ago another attempt was made, and with better success. The Corporation granted the use of a small room at the Guildhall, and purchased the Cottrel-Clark Collection. The Hawley Collection and some minor ones were presented, and the whole arranged as well as space would permit. At present, however, the space is quite inadequate for the exhibition of the steadily increasing collections, and matters are at a stand-still.

Curator.—Mr. E. GLEDHILL.

DORCHESTER.

Dorset County Museum.

Governing Body.—A President (the Earl of Eldon), three Vice-Presidents, three Trustees, Treasurer, Hon. Secretary, Secretary, Curator, and sixteen other members of Council.

Staff.—A Curator and Sub-Curator.

Source of Income.—Voluntary subscriptions.

Nature of Collections.—Chiefly objects illustrating the antiquities and natural history of Dorset. Nothing is bought that does not come under this head. But a large number of other specimens have been acquired, *e g.*, an almost matchless collection of polished fragments of decorative glass from Rome, presented by Sir J. C. Robinson.

Special Collections.—The Warne, Cunnington, and Hogg Dorset collections (antiquities), and the Pearce-Edgcumbe and Wolf collections of ancient coins found in Dorchester. There is also on loan a series of specimens from the Hall collection of Dorset antiquities.

Times and Terms of Admission.—The museum is open on working days from 9 a.m. to dusk. The charge for admission to non-subscribers is 2d. The museum reading room is open from 9 a.m to 10 p.m., admission to non-subscribers, 4d Subscription to museum and reading room, £1. 1s. 0d. a year. There are reduced terms for the evening use of the reading room only.

Lectures.—Public lectures are not given. The Dorset Field Club holds its winter meetings in the reading room, and at these meetings papers of high valce are often read.

Loan of Collections.—Specimens are only very seldom lent out.

Income and Expenses.—In 1902 the receipts amounted to £241. 12s. 1d. and the expenses to £235. 17s. 1d.

Exhibition Space.—A lofty hall, 90 ft. × 30 ft , forms the museum; it was designed for galleries, but these have not yet been added. A room at present used as a school of art was, in the original design, intended to be absorbed into the museum, but this has not yet been found possible.

Publications.—A penny guide-book and a sixpenny catalogue of Dorset Bronze Implements in the museum, both by the Curator. There are also MS. catalogues of the Dorset pre-Roman and Roman Pottery in the museum, also by the Curator.

General Information.—A strong point is made of labelling. The museum collection of middle Purbeck fishes and reptiles is by far the best in England, outside the British Museum. Among other noteworthy features are:—Barrow remains (very good), Roman pavements, and objects worked in "Kimmeridge Coal." Owing to the limited amount of accommodation, the cases are very crowded with specimens.

Curator.—Mr. H. J. Moule, M.A. (Cantab.)

DOVER.

Dover Museum.

Governing Body.—Markets and Museum Committee of the Corporation.

Staff.—Honorary curator, exhibitor, and assistant.

Source of Income.—Rates.

Nature of Collections.—Natural History, Ethnology, Antiquities, Pottery, and various Art objects.

Times and Terms of Admission.—Open 10 a.m. to 4 p.m.; on Wednesday, 10 a.m. to 9 p.m.; from April to October, 11 a.m. to 5 p m.; on Wednesday, 11 a.m. to 9 p.m. Admission free.

Number of Visitors.—34,464 in 1899.

Loan of Collections or Pictures.—None are lent.

Income and Working Expenses.—The working expenses for 1899-1900 were £144.

Exhibition Space.—Eight rooms, dimensions and contents as follows;—

1.	70 ft. 6 in. × 20 ft. 4 in.	Birds, Minerals, Shells, Fossils.
2.	53 ft. × 16 ft.	Mammals.
3.	25 ft. × 22 ft.	Birds, Fossils, Roman Pottery, Household objects,
4.	22 ft. × 17 ft.	Reptiles, Fish, Ethnological objects.
5.	18 ft. × 17 ft. 6in. ..	South Kensington Collections.
6.	20 ft. × 15 ft.	
7.	20 ft. × 14 ft. 6 in. ..	Models of Boats, Birds' Eggs, and
8.	15 ft. × 12 ft. 6 in. ..	Botanical Specimens.

Honorary Curator.—W. J. Barnes, J.P.

DUNDEE.

Dundee Public Museum and Art Gallery.

Governing Body.—The Dundee Free Library Committee.

Staff.—Curator, sub-curator, one assistant, four attendants, one woman cleaner.

Source of Income.—Rates.

Nature of Collections.—I. Natural History. II. Art, including (1) Sculpture, (2) general art objects, (3) Paintings in oil and in water-colour, engravings, etchings. &c. The Natural History collections include a representative series of Arctic animals, derived from the whale fisheries, of which Dundee is the chief British centre. The Art Gallery contains a large collection of casts from classical and Renaissance sculpture, and an extensive series of paintings, drawings, engravings, and photographs of Dundee and district, referring principally to the past.

Times and Terms of Admission.—Open daily all the year round, and also on three evenings in the week. On Saturdays and public holidays, open continuously. Admission free.

Number of Visitors.—345,807 in 1902.

Lectures.—Public lectures on sculpture and other art subjects are given in the art gallery; also explanatory lectures on the paintings.

Loan of Collections, &c.—Pictures are lent to other art galleries.

Income and Working Expenses.—Income, £1,100. This only just covers expenses.

Exhibition Space.—Natural History, floor space, 8,848 sq. ft.; wall space, 11,629 sq. ft. Art, floor space, 8,051 sq. ft.; wall space, 11,325 sq. ft.

Publications.—(1) Guide to the Dundee Museum and Art Galleries; (2) General Descriptive Guide to the "Old Dundee" Collection; (3) Annual Report and occasional special reports.

General Information.—The Natural History Museum is distinct from the Art Galleries. The permanent collection of paintings is large, and contains some fine works, all of which have been presented or bequeathed. No picture has ever been purchased.

Curator.—JOHN MACLAUCHLAN.

DUNDEE—*(Continued).*

Dudhope Park Museum of Technique & Archæology.

Governing Body.—The Dundee Free Library Committee.

Staff.—Curator, sub-curator, one assistant, two attendants, one woman cleaner.

Source of Income.—Rates. *(See "General Information.")*

Nature of Collections.—I. Technique: (1) Engineering, (2) Raw products, (3) Industry. II. Archæology. III. Physiography. Under the latter head are a number of working models—an orrery, a model to illustrate eclipses, deep-sea sounding apparatus, and models to illustrate the action of volcanoes, geysers, ocean currents, water spouts, and tornado clouds.

Times and Terms of Admission.—Open daily all the year round, closing at dusk. From October 1st to April 30th, evenings reserved for Technical and Engineering Classes. On Saturdays and public holidays, open continuously. Admission free.

Number of Visitors.—160,986 in 1902.

Lectures.—Public lectures are given in the museum on Technique and on Physiography,

Income and Working Expenses.—£350 a year.

Exhibition Space.—Technical department, floor space, 5,436 sq. ft,; wall space, 10,010 sq. ft. Archæological department, floor space, 3,099 sq. ft.; wall space, 8,750 sq. ft.

Publications.—Annual Report and occasional special reports.

General Information.—The museum was opened in 1900, and for the first two years the income was derived from a special grant from the Town Council, out of residue grant. Now that the library rate is to be increased from 1d. to 2d., the museum will be sustained from the library rate. The Archæological collections are kept together in a separate part of the building.

DUNFERMLINE.

Dunfermline Archæological Museum.

Governing Body.—A President, Vice-President, Treasurer, Secretary, and two Curators.

Source of Income.—Subscriptions and donations.

Nature of Collections.—Archæological, limited mainly to Dunfermline and Fife.

Special Collections—(1) A collection of books, pamphlets, &c., published at Dunfermline. (2) A collection of books illustrative of early printing, and the earliest editions of the more distinguished English writers. (3) A collection of ancient coins. (4) A collection of stone implements, &c., found in Fife.

Times and Terms of Admission.—Museum open free.

Lectures.—These are occasionally given.

Loan of Collections, &c.—Some of the antiquities were lent to the Glasgow Exhibition.

Exhibition space.—The museum is divided into two parts. One was formed, at the expense of Mr. Andrew Carnegie, from an old tower in the Abbey ruins. It consists of three small compartments, and contains articles in stone and iron. The other part is a room in the Public Library buildings; it contains, books, manuscripts, pictures, and miscellaneous articles, some of them illustrative of the local linen industry.

General Information.—The museum has only been in existence for a few years. It was formed for the purpose of preserving interesting or valuable Dunfermline relics; these have hitherto been dispersed and lost to the town for want of a suitable home. All articles are vested in the Town Council. It is proposed to endow the museum and place the management in the hands of the Public Library Committee.

Curators.—The Rev. DAVID IMRIE and GEORGE ROBERTSON, Esq., F.S.A.

DUNSTABLE.

A case of specimens for exhibition has been placed in the Magistrates' Room, and put in the charge of Mr. Councillor Garrett. It is hoped that this may be the nucleus of a town museum.

DURHAM.

Durham University Museum.

Governing Body.—Board of Curators appointed by the University Senate.

Staff.—One sub-curator.

Source of Income.—No iucome, except a subscription of £20 per annum from the Dean and Chapter. The University has the freehold of the building, and provides coal and pays rates.

Nature of Collections.—I. ORNITHOLOGY, general collection of birds, and a complete collection of British birds, including a fine specimen of the Great Auk, presented by the Rev. T. Gisborne; II. BOTANY, a herbarium of plants of the county; III. MINERALOGY, general collection and local collection from Durham lead mines; IV. ARCHÆOLOGY, Roman antiquities, British flint implements, &c.

Special Collections.—I. Birds of Castle Eden, II. Roman remains from Binchester.

Time and Terms of Admission.—Open daily; admission twopence.

Loan of Collections, &c.—None lent out.

Sub-Curator.—JOSEPH CULLINGFORD.

EASTBOURNE.

The Caldecot Museum.

This is a small museum, open to the public. It contains collections of rocks, fossils, plants, and birds, and miscellaneous "curiosities." At present, a technical institute is in course of erection in Eastbourne; and it is the intention of the Eastbourne Natural History Society (to which the Caldecot Museum belongs) to hand over the collections to the Town Council, as soon as the new buildings are finished, to form the nucleus of a town museum.

Curator.—Dr. HENRY HABGOOD

ELGIN.

Elgin Museum.

Governing Body.—Twelve directors elected by the Elgin and Morayshire Literary and Scientific Association. The directors appoint one of their number as president, and they are assisted by a secretary and treasurer.

Staff.—Curator and keeper.

Source of Income.—Fees from visitors and subscriptions from members of the Literary and Scientific Association.

Nature of Collections.—Natural history, geology, archæology, and general. The collection of fossils from the well-known Elgin sandstones is a strong feature.

Time and Terms of Admission.—Open daily, 10 a.m. to 5 p.m. Admission, 6d. per person; parties of three or more, 4d. each; children under twelve, 2d.

Number of Visitors.—About 2,000 annually.

Public Lectures.—Given very occasionally.

Loan of Collections.—Specimens occasionally lent. A few sent to the Glasgow Exhibition of 1902.

Income and Working Expenses.—The income just covers the working expenses.

Publications.—Transactions of the Northern Societies of Scientific Associations, published once every two years. There are also one or two works by members of the Literary and Scientific Association.

General Information.—The Elgin Museum is the best general museum in the North of Scotland. Though its strongest point is the collection of old red sandstone fossils (of which specimens are not unfrequently sent to London), other departments are fairly well represented. The museum receives no public support or endowment; it is the property of the Elgin and Morayshire Literary and Scientific Association, a body which, since its inception in 1838, has done much useful work.

Curator and Keeper.—Mr. A. Paterson.

ETON.

Eton College Museum.

Governing Body.—The Governors of Eton College.

Staff.—Mr. M. D. Hill, a science master in the college, acts as keeper, in addition to his teaching work.

Source of Income.—The school fund, from which £70 a year is allowed.

Nature of Collections.—These are chiefly intended to illustrate local natural history; there are also teaching collections in botany, zoology, and geology. In addition to these, there are small collections not connected with this scheme: notably, the finest collection of blue Egyptian Faïence cups extant; also, many other examples of ornaments, Ushabti, &c., from tombs.

Times and Terms of Admission.—Daily, from 12 to 1.30 p.m.; on Sundays, 3.30 to 5 p,m. Admission free.

Lectures.—The keeper occasionally gives lectures in a theatre adjoining the museum.

Exhibition Space.—Collections chiefly in wall cases round a room, but the centre of the room also contains table cases and show cases like those at South Kensington. The latter contain the Egyptian antiquities.

Publications.—A guide to the museum.

General Information.—The museum is intended to be mainly a teaching museum, and the general scheme of arrangement has been drawn up with a view to giving as much instruction, general and special, in natural history as is possible. There is an index collection intended to form a general introduction to the study of natural history, and so designed as to illustrate not only the classification of animals, plants, and minerals, but also geological history, variation, and natural selection. In addition to these are (1) local collections, confined to the counties of Bucks. and Berks.; (2) supplementary British collections, from parts of British Isles outside the above counties; and (3) students' collections. Special prominence is given to work done by the pupils of the college.

EXETER.

Royal Albert Memorial Museum.

Governing Body.—The Governors of the Royal Albert Memorial (twenty members of the Town Council and sixteen gentlemen not on that council, presided over by the Mayor) appoint thirteen of their number to act as a Museum Committee.

Staff.—A curator and one assistant.

Source of Income.—Rates.

Nature of Collections.—General and local collections in biology, geology, archæology, and ethnology. There is also a small art gallery, and loan collections of art objects from South Kensington are exhibited.

Special Collections.—The Brodrick collection of pictorial groups of birds of prey; the Montague cabinet of mollusca; the Sladen collection of recent and fossil echinoderms. This last collection, to which is attached a library of echinoderm literature, has been recently presented by Mrs. Sladen.

Times and Terms of Admission.—10 a.m. to dusk daily. Admission free.

Number of Visitors.—About 60,000 annually.

Lectures.—Popular science lectures are given by the Curator, at intervals, in the College Lecture Room. Admission one penny.

Loan of Collections, &c.—None are lent out.

Income and Working Expenses.—About £450. The total amount derived from the penny rate is divided between the museum and the library. The working expenses of the museum absorb all its income, and its reorganisation is seriously retarded by want of funds.

Exhibition Space.—Seven rooms, allotted as follows:—Ground floor—Room 1, zoological type collection; Room 2, economic entomology, and cabinets of insects, birds' eggs, &c. First floor—Room 3 (D'Urban gallery), local collections of mammals, birds, and fishes, general and local collections of rocks, minerals, and fossils; Room 4, archæology; Room 5, engravings and water colours; Room 6, archæology and ethnology; Room 7, general art gallery.

General Information.—The Royal Albert Memorial is an institution comprising in the same building and under the same management the Central Museum and Reference Library of the County, the Free Library and Reading Room of the City, and a University College. An effort is, therefore, being made to secure in the museum an arrangement helpful both to the student and to the general public.

Curator.—F. R. Rowley, F.R.M.S.

EDINBURGH.

Museum of the Royal College of Surgeons of Edinburgh.

Governing Body.—Fellows of the Royal College of Surgeons, Edinburgh.

Staff.—A conservator and two assistants.

Source of Income. College Funds.

Nature of Collections.—Anatomical. Anthropological, Pathological, and Zoological.

Special Collections.—The Barclay collection, the Bell collection, and some others; Struthers collection, &c.

Times and Terms of Admission.— Open daily (except Tuesdays, Sundays, and holidays). noon to 4 p.m.; on Saturdays, 10 a.m. to 4 p.m. Free.

Lectures.—No public lectures; demonstrations to medical students.

Conservator.—David Waterston, M.D., F.R.C.S.E., F.R.S.E.

EDINBURGH *(continued)*.

Municipal Museum.

The collections that constitute this museum are housed in the city chambers. They contain only articles of local interest, and are of a miscellaneous character The public is admitted daily, from 10 a.m. to 4 p.m. (on Saturday, from 10 a.m. to 1 p.m.) No charge is made for admission. The special feature of the museum best worthy of note is a collection of relics relating to Burns.

FOLKESTONE.

Folkestone Museum.

Governing Body.—A committee of the Town Council, consisting of members of the council and of others specially qualified to serve.

Staff.—Honorary curators and an assistant curator permanently in charge of the museum.

Source of Income.—A halfpenny rate levied under the Museums and Gymnasiums Act of 1891.

Nature of Collections.—Archæological, Botanical, Geological, Mineralogical, and relating to general Natural History. There is a specially good collection of Gault fossils, and collections of local plants and birds.

Times and Terms of Admission.—Daily, from 10 a.m. to 1 p.m., and from 3 p.m. to 9 p.m.; but on Thursdays from 6 p.m. to 9 p.m. Admission free.

Number of Visitors.—About 17,000 annually.

Loan of Specimens.—None are lent out.

Income and Expenditure.—£433. 10s. 0d. a year. Income and expenses nearly balance each other.

Assistant Curator in Charge.—JOHN ASHTELL.

FROME.

Museum of the Frome Literary and Scientific Institution.

Governing Body.—Committee of the Institution.

Staff.—Honorary Curator (Mr. John Coles, Jun.) and a caretaker.

Source of Income.—The museum has no separate income, and nothing has been spent on it for several years.

Nature of Collections.—Natural history, geology, ethnology, and local archæology. A good library is attached.

Times and Terms of Admission.—There are no regulations in force at present. Members of the institution and of the general public can visit the museum at any time during the day on application.

Number of Visitors. Practically nil.

Lectures.—After being discontinued for many years are now given occasionally during the winter months.

Exhibition Space.—One large room. This is quite insufficient for the display of the specimens, most of which are in drawers and cabinets.

General Information.—The museum was established over half-a-century ago (the visitors' book dates from 1845). At that time much interest was taken in it, and lectures were regularly given; but of late years it has been much neglected, and was without a curator till the present honorary curator accepted office at the end of last year.

Honorary Curator.—JOHN COLES, Esq., Jun.

GLASGOW.

Glasgow Art Gallery and Museum, Kelvingrove.

Governing Body.—The Corporation of Glasgow, through a Sub-committee of the Parks and Galleries Committee.

Museum Staff.—One Superintendent; a Curator of Art Museum, Ethnology, and Antiquities; a Curator of Pictures and Sculpture; a Curator of Zoology, Geology, and Mineralogy; a Curator of Technology and Engineering; three lady clerks, one clerk of works, thirty-seven artizans and attendants, ten constables.

Source of Income.—Parks and Galleries Rate.

Nature of Collections.—I. An Art Gallery, containing pictures, ancient and modern, foreign and British, and sculpture. II. A General Museum, with the following divisions:—Zoology, Geology, Mineralogy, Ethnology; Antiquities, local and general; Engineering and Ship-building. Technology, Art objects. There is a notable collection of pictures, drawings, and photographs of old Glasgow.

Special Collections.—The McLellan, Ewing, Graham-Gilbert, Teacher, and Reid collections of pictures; the Glen and Fleming collections of Minerals latter chiefly Scottish); the Young collection of carboniferous fossils; the Simpson collection of drawings of old Glasgow.

Times and Terms of Admission.—Open daily, free, from 10 a.m. till 9 30 p m.

Number of Visitors.—A monthly average of 120,000 since the opening of the building in October last.

Lectures.—These were systematically given in the old galleries, but are not yet organised in the new buildings; but parties and societies are frequently guided over departments.

GLASGOW *(continued).*

Glasgow Art Gallery and Museum, Kelvingrove—*(continued.)*

Loan of Collections, &c.—Pictures and other suitable objects freely lent to other corporations and to special exhibitions.

Exhibition Space.—I. PICTURES—six galleries, four pavilions, four cabinets. II. SCULPTURE—Grand Hall. III. NATURAL HISTORY—East Court, three saloons, two pavilions. IV. TECHNOLOGY, ENGINEERING, and ANTIQUITIES—West Court, three saloons, two pavilions. V. ART MUSEUM—Balconies, two saloons.

Publications.—(i) Catalogue of pictures and sculpture, one shilling and sixpence; (ii) Catalogue of Simpson collection of drawings of old Glasgow, one penny; (iii) Catalogue of Teacher collection of pictures, one penny.

General Information.—A full account of the galleries and museum can be obtained by reference to the *Museums Journal*, Vol. I. No. 2, and to the presidential address delivered at the Glasgow meeting of the Museums Association in 1896 (see *Report of Proceedings*, 1896). There is a grand organ in the institution, and musical performances are given on two evenings weekly, and to which great crowds are attracted.

Director.—JAMES PATON, F.L.S.

GLASGOW *(continued)*.

Glasgow Green Branch Museum (People's Palace).

Governing Body.—The Corporation of Glasgow through a Sub-Committee of the Parks and Galleries Committee.

Staff.—A curator, six artizans and attendants, three constables.

Source of Income.—Parks and Galleries rate.

Nature of Collections.—(i) An Art Gallery containing Pictures, ancient and modern, (ii) A general museum comprising Type Collection of Natural History, Mineralogy, Pottery, Metal Work &c.

Times and Terms of Admission.—Open daily, free from 11 a m. to 10 p.m.

Number of Visitors.—About 500,000 annually.

Income and Expenses.—Expenditure about £1,500 per annum.

Exhibition Space.—Pictures, three saloons; art metal-work exhibition, mid. floor; natural history, pottery, &c., ground floor.

Publications.—Catalogues of Industrial Art Exhibitions, published yearly, price one penny.

General Information.—See article on "A People's Palace" in the Annual Report of the Museums Association for 1899. Yearly exhibitions and competitions in Industrial Art are held For the present year the exhibition consists of Art Metal-work. Prizes are given in the competition section.

Director —James Paton, F.L.S.

Curator.—Thos. Lugton.

GLASGOW *(continued)*.

Glasgow Camphill Gallery (Branch).

Governing Body.—The Corporation of Glasgow through a Sub-Committee of the Parks and Galleries Committee.

Staff.—Superintendent, one artizan, and one female attendant.

Source of Income.—Parks and Galleries rate.

Nature of Collections.—An Art Gallery and General Museum, embracing Pictures (modern), Natural History (type collection), Pottery, Glass, Metal-work, &c.

Times and Terms of Admission.—Open daily, free, from 11 a.m. till dusk.

Number of Visitors.—About 85,000 annually.

Income and Working Expenses.—Expenditure about £360 per annum.

Exhibition Space.—Four rooms, the walls of which are hung with pictures. The Art objects are distributed throughout the rooms in cases. Part of the wall space is occupied with cases containing the Natural History collections.

Director.—JAMES PATON, F.L.S.

ABERDEEN *(continued)*.

Archæological Museum, King's College.

Governing Body.—The University Court.

Staff.—A curator.

Nature of Collections.—Archæological. They contain inscribed and sculptured stones, bronzes, stone vases, pottery, amulets, sepulchral remaine, coins, stone implements, antique jewellery, and many casts. The museum is indebted to a number of donors, especially the Egypt Exploration Fund, Dr. Flinders Petrie, Dr. Macaldowie, Dr. Grant Bey, and Mrs. Grant, and Mr. Soutter, of Brisbane. Miss A. A. Pirie (now Mrs. Quibell) arranged and classified the specimens.

Special Collections.—The Grant Bey Collection of Egyptian Antiquities.

Curator.—Miss NORA MACDONALD.

BELFAST

Belfast Museum.

Governing Body.—The Council of the Belfast Natural History and Philosophical Society.

Staff.—Curator and Assistant Curator.

Source of Income.—Members' Subscriptions and Admission Fees.

Nature of Collections.—Natural History, Ethnology and Archæology. The Antiquities and Natural History specimens are mainly local.

Times and Terms of Admission.—Open daily 10 a.m. till 4 p.m. in winter, and till 6 p.m. in summer. Admission 6d. (2d. during Easter holidays.)

Number of Visitors.—4000 to 5000 annually.

Lectures.—Lectures are given or papers read at the monthly meetings.

Loan of Collections and Pictures.—Specimens are sometimes lent to illustrate special subjects.

Income and Working Expenses.—The expenditure depends on the income, which is about £250 a year.

Exhibition Space.—There are eight rooms, one used as a library, and one as store-room. Ground Floor: room of 490 square feet devoted to local Geology, one of 380 to Irish Ornithology, one of 490 to Ethnology, and one of 380 to Irish antiquities First floor: 1250 square feet are given up to foreign birds and to insects, 380 to library. Second floor: 1250 square feet devoted to foreign Mammals and Ethnology, above this, a gallery given up to general Zoology.

Curator.—Mr. S. A. Stewart.

BELFAST *(continued)*.

Corporation Art Gallery and Museum.

Governing Body.—The Corporation through the Library and Technical Instruction Committee.

Staff.—Curator and three attendants.

Nature of Collections.—An Art Gallery and General Museum. The greater part of the pictures in the art gallery are lent. There is a good collection of minerals, and one of recent shells. Cases containing pottery, glass, metal-work, &c., &c. Also the collection of Irish and Prehistoric Antiquities made by the late Canon Grainger.

Times and Terms of Admission.—Always free. Mondays, open 11 a.m. to 6 p.m.; Tuesdays, 11 a.m. to 9 p.m; Wednesdays, 11 a.m. to 3 p.m.; Thursdays, 11 a.m. to 6 p.m.; Fridays, 11 a.m. to 6 p.m.; Saturdays, 11 a.m. to 9 p.m.

Number of Visitors.—About 350,000 annually.

Income and Working Expenses.—

Exhibition space.—Three rooms, on the walls of which the pictures are hung, and an annexe for the Grainger collection and other antiquities.

Curator.—CHARLES ELCOCK.

CAWTHORNE.

The Cawthorne Jubilee Museum.

Governing Body.—A President, Vice-President, Secretary, and Committee elected by the members.

Staff.—The Chairman of the Committee acts as Curator, and there is a paid caretaker.

Source of Income.—1. Members' Subscriptions (1/- a year from Adults, 6d. from Children; Family Tickets, 2/-). 2. Visitors' Box (each visitor is expected to put "not less than one penny" into the box).

Nature of Collections.—Minerals, local coal fossils, shells, birds (with nests and eggs), moths and butterflies, coins, ancient pottery (Cyprus, Lipari, Mexico, &c.), weapons from Japan, New Zealand, Soudan, &c.

Times and Terms of Admission.—Open daily (application to be made to Caretaker); on Sundays open to members and friends after 12-30 p.m. Members admitted free, other visitors 1d. each.

Number of Visitors.—From 2,800 to 3,000 annually, exclusive of school parties.

Lectures.—These are occasionally given during the winter months. There are occasional classes for the school children of the village.

Income and Working Expenses.—About £15 or £16 a year.

Exhibition Space.—Museum is 54 ft. × 15 ft., and there is a recess at the side which contains a case (8 ft. × 4½ ft.) of miscellaneous objects. Flat cases (general width, 2½ ft.) are placed against the walls, and are allotted as follows:—Minerals, 34½ ft.; coal fossils, 7 ft; birds' nests, 7½ ft.; ancient pottery, 6 ft.; coins, 2½ ft.; arts and manufactures. 8 ft.; cases of birds are arranged against one wall for a space of 16 ft. × 8 ft. high; weapons and drawings shewing sections of neighbouring coal mines are hung upon other portions of the walls; the moths and butterflies are in 20 small drawers; birds' eggs in 5, shells in 14.

General Information.—The museum was founded in 1884 by the Rev. C. T. Pratt (Vicar of Cawthorne), at the suggestion of Mr. Roddam Spencer-Stanhope. Col. Spencer-Stanhope, finding that it was appreciated, built a new museum in 1887. The collections have been formed from donations from various donors, notably from Mr. Ruskin, Mr. W. H. Hudleston, and Capt. Spencer-Stanhope, and they are arranged and labelled with a view to interesting the people of the village in science.

Curator.—The Rev. C. T. Pratt (Vicar of Cawthorne, Barnsley, Yorks.)

DEVIZES.

Museum of the Wiltshire Archæological and Natural History Society.

Governing Body.—The Committee of the Society.

Staff.—Three Honorary Curators and a caretaker.

Source of Income.—Funds of the society and admission fees.

Nature of Collections.—Archæology and Natural History. Specimens are for the most part from the county. The local Barrow remains and fossils are particularly good, and there is a first-rate collection of Wilts. tokens of the 17th century. There is a good library.

Special Collections.—The Stourhead collection of Barrow remains from S. Wilts. formed by the late Wm. Cunnington and Sir H. C. Hoare.

Times and Terms of Admission.—Open daily, from 10 a.m. to 4 p.m. in winter, and 5 p.m. in summer. Admission free to members of the society, 3d. for the general public.

Number of Visitors.—About 800 in 1902.

Exhibition Space.—Entrance hall and one large room devoted to Antiquities, one large room to Natural History, one smaller room for Library and Coins.

Publications.—1. Catalogue of the Stourhead Collection of Antiquities (pp. iv. + 96, each object described, 175 figures), price 2/6. 2. Catalogue of the Wilts. Trade Tokens in the museum, price 6d. 3. Catalogue of the Library, 2/6 (Appendixes I., II., III., 3d. each). 4. Catalogue of the Drawings, Prints, and Maps, price 2/-. 5. The Wiltshire Archæological and Natural History Society's Magazine, published half-yearly at 5/6 per number.

General Information.—The main object of the society in forming this museum is to illustrate the natural history and antiquities of the county, and no attempt is made to secure specimens from outside this district. Owing to the wealth of the county in Barrows, the museum contains a collection of antiquities of quite exceptional merit. The library contains a large collection of Wiltshire prints and drawings, and every effort is made to secure books, pamphlets, and papers connected with the county or written by Wiltshire men. There are already over 60 bound volumes of Wiltshire tracts. Unfortunately the collections are very crowded, and an appeal is being made in the county for funds to enable the society to at least double its premises.

Hon. Curator.—E. Howard Cunnington.

DUBLIN.

Museum of Zoology and Comparative Anatomy of Trinity College, Dublin.

Governing Body.—The Provost and Senior Fellows of Trinity College Dublin.

Staff.—A Curator and two assistants.

Source of Income.—Annual allowance.

Nature of Collections.—(i.) General zoology; (ii.) medical zoology; (iii.) comparative anatomy; and (iv.) a set of specially-designed microscopes, with specimens arranged and described, for students.

Times and Terms of Admission.—10 a.m. to to 4 p.m. daily. Admission, free.

Loan of Collections, &c.—Only for very special purposes.

Income and Working Expenses.—£160 per annum.

Exhibition Space.—(i.) Ground floor devoted to general zoology; (ii.) one gallery to medical zoology, osteology, and microscopes; (iii.) one gallery to comparative anatomy; (iv.) zoological laboratory; (v.) reading and lecture room: (vi.) workshop; (vii.) Professor's rooms.

General Remarks.—Trinity College also possesses (i.) a Pathological museum; (ii.) a Chemical museum; (iii.) a Geological museum; and (iv.) an Engineering museum.

Curator of the Zoological Museum.—H. W. MACKINTOSH, M.A.

DUBLIN *(continued)*.

Herbarium of Trinity College.

Governing Body.—The Board of Trinity College.

Staff.—A Keeper (the Professor of Botany) and one assistant.

Nature of Collections.—Entirely botanical. The phanerogams include collections from most parts of the world; the cryptogams include collections of (*a*) algæ, (*b*) mosses and liverworts, (*c*) fungi and lichens, (*d*) ferns and other vascular cryptogams.

Special Collections. -These include collections made by Greville, Balfour, Henslow, A. G. More, W. H. Hind, Harvey, J. F. Bergin, Miss E. Reynell. Dr. J. T. Mackay's collection of Irish plants is kept separate. There is also Dr. Harvey's collection of algæ.

General Information.—The British herbarium is kept separate from the general herbarium. A botanical laboratory is attached (at present under the management of Dr. H. Dixon), and in this demonstrations are given. Fresh material is obtained daily from the college botanical gardens.

Keeper of the Herbarium.—Dr. Ed. Perceval Wright, Professor of Botany in the University of Dublin.

DUBLIN—*(Continued).*

Museum of the Royal College of Surgeons of Ireland.

Nature of Collections.—The museum consists of four departments :—1. The Anatomical. 2. The Pathological. 3. The Wax Model collection. 4. The "Butcher" museum. The anatomical museum was founded in 1841, and has since been largely increased. It contains about 200 skeletons of various animals, besides a large collection of of dissected anatomical preparations, dry and preserved in spirit, Also some remarkable mercurial injections, and an anthropological series of casts of heads of various races of man.

The Pathological museum, which had originally been inconveniently placed in the same room with the wax model collection. was in 1878 transferred to the building newly erected for its accommodation, above the college library. It contains upwards of 5,000 specimens of disease preserved in spirit, a large collection of casts, numerous microscopic preparations of pathological conditions, collections of urinary calculi, dental anomalies, old surgical instruments, &c. Very many of these specimens are unique.

The Wax Model collection was presented to the college by His Grace the Duke of Northumberland, Lord Lieutenant of Ireland, in the year 1830. The specimens are thirty-eight in number, and are very skilfully and accurately modelled illustrations of human regional anatomy, executed in wax, by Talrich, of Paris. Further models have been since contributed by J. H. Lyddon, L.R.C.S.I.

The "Butcher" museum has been erected for the accommodation of the large and valuable series of surgical preparations collected by Mr. Richard G. H. Butcher, sometime President and Examiner, who presented them to the college museum. The entire cost of the new "Butcher" museum apartments was defrayed by the late Mr. Matthew O'Reilly Dease, D.L., in testimony of his high esteem for and gratitude to Mr. Butcher, and his sense of the value of the college museum to the surgical profession and to the public at large.

Times and Terms of Admission.—The museum is open for study and inspection on each day, between the hours of 10 a.m. and 5 p.m. Matriculated pupils of the college are privileged to study therein; and visitors are, subject to the approval of the curator, admitted to view the specimens, on writing their names in the visitors' book.

Curator.—ARTHUR HAMILTON WHITE, Professor of Pathology and Bacteriology to the College.

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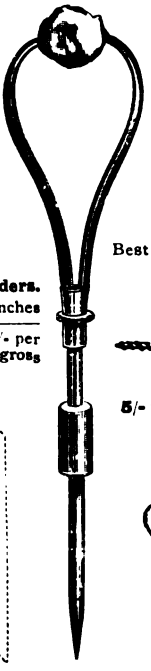

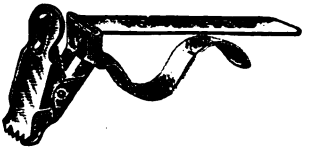

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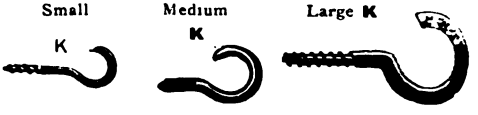

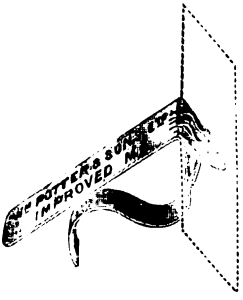

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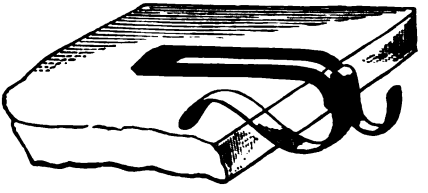

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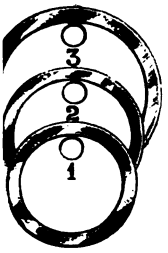

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